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ABSTRACT

This report describes the development and evaluation of an interactive marketing diskette which describes the characteristics, advantages, and application procedures for each of the major computer-based graduate programs at Nova University. Copies of the diskettes were distributed at the 1988 Florida Instructional Computing Conference and were mailed to prospective applicants for the computer-based graduate programs. An evaluative questionnaire was completed by academic officials of the university, one academic official from another university, and colleagues. The results of the formal evaluation showed a favorable reaction to the new media approach, with respondents describing the diskettes as professional in quality, concise, attractive, and appropriate for their intended use. Several participants indicated that they would now consider initiating a similar project for their own institution. Nine appendixes include print-outs of the hardcopy listing and the color and monochrome screens for the diskette, flowcharts of the screen sequence, and a copy of the survey instrument. (12 referenced) (EW)

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MARKETING VIA COMPUTER DISKETTE

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NOVA UNIVERSITY

MARKETING VIA COMPUTER DISKETTE

by

Michael Thombs M.A., M.S.

COHORT 4

A Practicum - I Report submitted to the Ed. D. Program in Computer Education in partial fulfillment of the requirements for the degree of Doctor of Education in Computer Education.

NOVA UNIVERSITY

May 1988

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ABSTRACT

Marketing Via Computer Diskette.
Thombs, Michael E. 1987: Practicum - I, Nova University.
Ed. D. Program in Computer Education.

Descriptors: Marketing/ Disk/ Diskette/ Public Relations/ Sales/ Marketing Strategy/ Story Board/ Authoring.

This project addressed the marketing and promotional needs of a major university for its graduate programs. Institutions that grant formal degrees and are involved with computer-based educational offerings are interested in innovative ways of marketing their programs. Admis- sions' representatives and program directors at Nova University were frustrated when they met a potential candidate who said, "This program is just what I have been looking for. Why haven't I heard about this before?". Nova University's Computer-Based Learning graduate programs became the subject for a new computer-based marketing strategy.

The project resulted in the development of an interactive marketing diskette covering the major computer-based graduate programs at NOVA University and the production of 1000 copies. Most of these were distributed at the 1988 Florida Instructional Computing Conference (FICC) in Orlando Florida. The remaining diskettes were mailed to perspective applicants for the computer-based learning programs. The contents of each diskette describes the characteristics, advantages, and application procedures as well as the benefits of each computer-based graduate degree program. Data was collected from current college catalogs, fliers, and interviews with program directors. The total cost of producing each diskette was just under one dollar.

A review of the literature and a survey of other computer-based marketing/advertising showed that there is a noticeable new trend in marketing strategies that made use of diskette recording media. FORD, GMC, and BUICK have all produced interactive computer-based marketing diskettes. FORD produced an upgraded version this year. The April issue of PC-Week features the new version of the FORD diskette that had a driving simulator on it.

The results of a formal evaluation showed a favorable reaction to the new media approach. Respondents to the formal evaluation described the diskettes as being of professional quality, concise, attractive, and appropriate for their intended use. Several participants in the formal evaluation process indicated that they would now consider initiating a similar project for their own institution.

CHAPTER I

This practicum was proposed to improve the marketing activities of University's Center for Computer-Based Learning (CBL) and for the Computer Education Department (CED). The project consisted of collecting data from current catalogs and from interviews with admissions representatives and program directors. This information was synthesized and transformed into an online computer-based marketing diskette. I played the part of an independent consultant who developed the system on diskette. Nova University was responsible for the duplication of diskettes and the process of printing the diskette labels.

It was my responsibility to select the appropriate development software package, learn how to use each package, and develop the marketing diskette. Nova University provided all the software, manuals, and blank diskettes. I was responsible for the format and appearance of the final finished product. I designed all of the monochrome and color screens, the interactive panels, and the sequence of the presentation used on the diskette.

CHAPTER II

Nova University offers several degree programs in the area of computer-based learning. Nova University needed a precise, inexpensive, and efficient way of contacting individuals who might be interested in any one of its degree programs. The computer-based advertising strategy was developed to help Nova University reach prime candidates for such a degree. A prime candidate is anyone with a prerequisite degree in a related area, is currently working in an educational or industrial training setting, and owns a PC. The diskette was distributed to hundreds of educators at the recent 1988 Florida Instructional Computing Conference (FICC). In total, 1000 copies were made for distribution and mailing. Cost for development was based on an original estimate of producing 3000 diskettes.

The marketing diskettes were produced for a cost of sixty-two cents each. The use of student labor and bulk purchase of computer diskettes contributed to this low per item cost. Traditional distribution methods include college catalogs and brochures. These documents are costly and do not guarantee that they will reach those who may be interested in the program(s). A preliminary study showed that a computer-based promotional document could be produced at a cost equal to or less than the cost of the production of a traditional document. The worksheet presented in Figure - 1 itemizes the costs for the project.

Development of 3000 Diskettes;

Authoring System(s):	IBM StoryBoard:(Owned *) ------00.00
	TTA - Raster: (IBM-PC) -------395.00
	Development(Student Labor)------0.00
	Diskettes X 3000 @ .35/each--1050.00
	Labor(copy) 1 copy = 1 min
	50 hours @ 4.00 / hour--------200.00
	Printing Labels --------------200.00
	Figure 1 $ .62 /each

It seemed appropriate that a university with programs in the area of computer-based training and learning would make use of those same means to market and advertise. Would that not be the best form of advertising? Those who may be interested in such a program would most appreciate the campaign. Those who may be currently enrolled in the program would be best suited to produce the marketing media. Today, a diskette is a valued item. At least, it can be reformatted and reused. The label and the sleeves were printed with the Nova University name, address, and logo. Even if the diskettes were used for other purposes, the printed advertising would still survive.

Only those who own or have access to a PC could use and review the diskette. Two assumptions were made: first, that many traditional catalogs were thrown away by uninterested individuals and would never reach a candidate, and second, the diskette would reach candidates who would use it, pass it along, or pass along a duplicate to someone else.

The computer-based learning programs at Nova University are primarily tuition-driven programs. The university has only a few candidates enter into its programs each semester. The diskette was designed specifically to increase the volume of applicants to the degree programs. When I interviewed the directors of the programs I found that many of the people that joined a program had searched several months and even years. The diskette was designed to help candidates find the right program. Word of mouth has currently been the most effective means of transmitting the news about each of the programs. Some of the programs might be consolidated or dropped if new sources of applicants are not found. The diskette was an attempt to reach that market.

FORD, BUICK, GMC, and Verbatim Disk companies have already produced similar diskettes. Buick (Flint, MI) and Ford Motor (Dearborn, MI) are using animated floppy diskettes as an alternative to showroom sales brochures. Buick plans to distribute 75,000 copies of the Macintosh version and 100,000 copies of the IBM version. In a poll of 200 recipients of the Buick diskette, 10% planned to purchase a new Buick. Other surveys showed that of PC users, 42% earned over $50,000/year, 72% are college graduates, and 51% are 35-54 years old. According to SoftAd Group (Sausalito, TX) who created the Buick and GMC diskette, 93% of the audience is male and 72% are married.

Lincoln-Mercury created a diskette, which was released on August 17, 1987. They received 80,000 requests for the diskette from business executives that own or operate a PC. Seven percent of these requests came within the first three weeks of the campaign. The promotion had a 21% response from a mailing of 123,000 PC users. Two hundred and sixty car sales and 75 leases have been attributed to the success of this program, according to M. Hogan, Exec. VP, Beaumont Bennett, the firm that handled the direct mail program.

Business Marketing (formerly Industrial Marketing) is using floppy diskettes to capitalize on the desktop microcomputer explosion. Their diskettes, distributed at trade shows, contain color graphics routines, and sound and hardcopy options. Diskettes allow customers to explore such functions as determining media costs, thereby giving a reason to retain the diskette. Business Marketing officials cited one drawback: they feel that top executives are less likely to pass information stored on diskettes to colleagues, than they would with traditional advertisements.

CHAPTER III

The evaluation procedure for this project proceeded as follows: I drafted a one-page formal survey form and attached an introductory cover page, see appendix A. Along with the letter and survey form, I enclosed a copy of the Nova diskette. The packets were sent to the department chair of Information Systems Science, the Academic Dean, the Provost, and the Director of the Graduate Independent Studies Programs at Salve Regina College, Newport R.I. I asked each of the above to complete an evaluation form. Twenty more evaluations were given to colleagues using the same form. The provost and the academic dean did not respond to my request. I feel that the survey base of 22 respondents are enough to draw reasonable conclusions in this type of project.

As a result of performing this practicum, I had hoped that I could interest future clients in similar marketing diskettes. Two of the respondents asked me to author a diskette for their company, Davis Publications, Worcester Mass. This job was completed (March 17,1988), and their diskettes were distributed at the Virginia Educational Technology Conference (Norfolk, VA. March 21-24, 1988). 500 diskettes were produced at a cost of $1.21 per diskette. The diskette provided monochrome screen and hardcopy listings of sample lessons from their Technology Series. I am now considering the production of a diskette for the Hanover Insurance Companies in their underwriting and claims offices. Informal feedback suggested the use of this type of media was popular and may be the beginning of a new trend.

A formal survey (see appendix - G), showed that 82% thought that the diskette represented a new and innovative form of marketing strategy, 90% felt that it was a useful marketing strategy, 77% felt that the diskette was well structured, 90% found the diskette easy to use, 82% thought that it was of a professional quality, 72% felt that they had could use a similar diskette in their area or department, and 100% felt that the diskette was well worth the production cost of $1.00. Since I had to go off campus to conduct many of the surveys, the last question was eliminated in this synthesis.

The use of marketing diskettes is still new and will generate interest at various levels for some time to come. There may also be some indirect advertising through journal articles that are likely to be written about this uncommon approach to marketing.

CHAPTER IV

The following is an outline of the design, development, and implementation of the project following the traditional steps of a four-phase system life-cycle method. The copying of diskettes, printing of labels, and distribution of diskettes was performed by NOVA staff. Each phase is then elaborated upon in the remainder of the chapter.

Phase I: Initial Investigation:

- Study the problem, research and collect available data for the project
- List constraints, rank objectives and define system output specifications
- Present a recommendation from several alternative solution strategies
- Report system feasibility

Phase II: System Design.

- Determine hardware and software requirements
- Write program design specifications
- Create a working model(prototype) and evaluate

Phase III: System Development.

- Code and test individual elements of the project
- Schedule and monitor deadlines
- Complete hardware and software needs, supplies, documentation, and training requirements for the operational system
- Test system

Phase IV: Implementation and Post Implementation Evaluation.

- System turnover and sign off
- Return of software & hardware, manuals, diskettes and other related supplies
- Reimbursement for materials purchased/rented
- Post Implementation evaluation
- Complete system documentation
- Develop maintenance procedure

Phase I: Initial Investigation (Preliminary Study).

I began the study phase of this project by reviewing the current literature on the subject of the use of diskettes in marketing strategy. My first search produced little useful information. However, another search of business related subjects produced several relevant articles. In the second search I learned of the attempts of FORD, BUICK, and GMC to address new audiences. In an April, 1988 issue of PC-WEEK, there appeared an article that summarizes the efforts of the car manufacturers listed and some others. This article speaks of a university that will generate a computer-based marketing strategy that will contain an interactive application form. After the review of the literature, I conducted interviews with key administrators at Nova University. I was able to conduct some of these at the 1987 winter institute. Others were done online with the UNIX electronic mail facility. Printed materials were collected from current catalogs and preview materials. Materials were supplied by the office of Computer Education and Computer-Based Learning.

I reviewed several authoring systems and story boarding software packages before selecting TTA by Raster Sciences Incorporated and IBM StoryBoard, IBM Corporation. The most important selection criterion was the ability to distribute freely the final product without restrictive copyright limitations. TTA by Raster Sciences imposed no copyright limitations, and IBM StoryBoard only required a copyright statement on the face of the diskette for the StoryTeller runtime module.

The original proposal called for the production of a diskette that would contain an Apple computer-based version on one side of the diskette and an IBM or MS-DOS compatible version on the opposite side. The the two versions would limit the storage capacity of each side of the diskette to 162KB. This idea was abandoned. It made more sense at the time to produce a diskette that could be used on both monochrome and color PC's and compatibles. I reviewed several authoring systems and storyboard software packages. I selected TTA by Raster Sciences, Incorporated to host the monochrome version and IBM's StoryBoard software to host the color version. A simple MS-DOS-based menu system and a series of batch files gave the diskette the capability of printing hardcopy information about the University to a local printer. A later enhancement allowed the user to view this information on either the monochrome or the color screen. Both the monochrome and the color-based versions were interactive. A sample of this effort is obtainable by writing Nova University, 3301 College Avenue, Fort Lauderdale, Florida 33314.

System Design

After I collected the necessary data, I developed a prototype of the final system. This prototype was reviewed by the directors of each of the programs involved in the marketing campaign. A flowchart of the sequence of the monochrome and color screens accompanied the prototype. Feedback from each document was then used to develop the final design specifications. A series of batch files and the DOS procedure were developed to aid the user setup and execute the programs contained on the diskette.

The Main Menu and all sub menus were defined and reviewed by the Director of Ed.D/CED. The sequence of screen flow followed the flowchart approved in the study phase. Copies of main menus, sub menus, and panels formed most of the Design Specification for this phase and the development phase of the project.

System Development

Coding and testing of panels, menus, and sub menus were performed in this phase of the project. System documentation was created at this time. A system maintenance procedure was also created to simplify future changes, updates, and additions to new programs of study. Two master diskettes were delivered to Nova University for duplication.

Implementation and Post Implementation Evaluation

Labeling and duplication were arranged by Ed.D/CED staff at Nova University. Procedures for this process were defined in the development phase of the project. Staff at NOVA were responsible for the purchasing of diskettes and labels, printing, and the distribution of the final diskettes. A maintenance procedure was defined and can be found in appendix - B.

In the implementation phase, the goals and objectives of the project were achieved. The marketing diskette was produced for a cost of under one dollar each. It contained monochrome and color versions of current catalog listings; it was interactive; and it was available in time for distribution at the Florida Instructional Conference in January 1988. The format and style of the diskette reflects the best elements of similar works, such as Ford, GMC, and Verbatum Corporation diskettes.

CHAPTER V

The diskettes were released and distributed January 25-29, 1988 at the Florida Instructional Computing Conference (FICC). Nova diskettes were issued to administrators at Nova University. Diskettes that were left over from the conference have been mailed to interested parties that contact Nova by word-of-mouth, US mail, or telephone.

Since this project was not research oriented, there have been no plans to conduct a research-based follow-up to determine the effect it may have had on enrollment and application solicitations.

The diskette was completed in time for reproduction and distribution at the conference (FICC January 25, 1988). It contained a color storyboard, an interactive monochrome presentation series, a hardcopy print option that contained a cover letter, and a summary of critical information for future reference. The diskette ran on an IBM/PC/XT/AT, although significant changes in presentation speed were noticeable when run on an PC/AT. IBM clones and compatibles could have been used. Color graphics, or color graphics emulation, was necessary to see the slide show presentation. A standard configuration was all that was necessary to use the other options. If a local printer was not attached, an option was provided for screen viewing of the hardcopy text.

The diskette has already drawn some attention to Nova University. There were several informal inquiries at the FICC, January 1988. The diskettes "sold like hot cakes." The decision to make all the diskettes MS-DOS compatible did not deter many Apple users. When the problem of format was discussed, it was found that most Apple and MacIntosh users had access to an IBM or IBM compatible either through another department or in an administrative office at their institution.

The diskette is now obsolete. Changes to the curriculum, new courses, and revised programs require constant disk updating. A maintenance procedure is attached and can be found in appendix - B. An Apple, CP/M, and/or MacIntosh version would be a fine addition but would not significantly increase the audience base. Concurrent versions would make yearly maintenance prohibitive. Another version could not be counted as a practicum project unless it contained research and/or comparisons with the previous MS-DOS version. If an Apple version were constructed, the use of an authoring system or story boarding software package is strongly recommended. A research-based practicum could be done by analyzing the response rate to the diskettes. The practicum could compare the use of diskettes with that of traditional media. The Ford Motors diskette

was mailed in response to a request form attached to a full-page ad. Seven percent of the those who requested copies of the diskette did so within the first three weeks of Ford's campaign. The survey period may require a span of several months to collect data.

If I were to repeat this project, there are several things I would do differently. I would search for an authoring system or desk-top publishing package that would support both the color and the monochrome versions. I would also recommend the use of prototyping in the problem definition and design phase of the project. In a presentation oriented project, traditional means of data acquisition and systems analysis are hard pressed for effective results. A prototype can be distributed for review and comment among persons representing a broad demographic domain. A working prototype can significantly reduce the time spent in the development phase. A prototype that does not satisfy end-users could eliminate large amounts of wasted time and effort.

I shared this practicum with staff and faculty at Salve Regina college. The Director of Salve Regina's Graduate Independent Studies Programs was interested in a similar diskette for her external degree programs. A publication company in Worcester, MA., Davis Publications, reviewed the Nova diskette and requested a similar diskette for distribution at an educational technology conference that was held in Norfolk VA, on March 21-24, 1988. The diskette was published and distributed for that conference. The cost of the diskettes averaged $1.21, and contained monochrome and hardcopy printouts of sample lessons from their technology series. A total of 500 diskettes were distributed. Executives at Davis considered the project a success. I also shared the diskette with the members of the management at the Hanover Insurance Company. They were interested in a training diskette in the agent agency area.

This project was the foundation for a major applied project at Nova University (MAP). The MAP is the equivalent of a doctoral thesis. Production of the Nova diskette gave me several ideas for this project. When the punched card went out of existence it took with it a wonderful business function, the turnaround document. A turnaround document is generated by an institution, then sent to a customer and processed. The document, after it has been processed, is returned to the source. The document is machine readable. The name "turnaround document" comes from its ability to be reread by the machine that created it. This eliminates costly

data entry procedures that may permit the introduction of erroneous data, typos, and misspellings. I foresee the possibility of computer-based diskettes acting as turnaround documents in special environments. This project shows that diskettes are an effective means for distributing information. The question now remains, should diskette technology be used to collect data, and if so, how?

LIST OF REFERENCES

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USA Today November 4, 1987 v. 6 no. 37 p. 18 "Disk Makers Try to Drive Sales"

Friday Report October 2, 1987 v. 0 no. 0 p.3 "Buick Continues to Market 1988 Models Via Floppy Disk Approach"

Advertising Age October 19, 1987 v. 58 no. 45 p. 124 "Swimsuit Software"

Adweek's Marketing Week August 17, 1987 v. 28 no. 38 p. 6-8 "Market Monitor: Disk Drive"

Folio: The Magazine for Magazine Management September, 1987 v. 16 no. 9 p. 76 "Compute's PC Magazine"

Marketing & Media Decisions August, 1987 v. 22 no. 8 p. 14 "A Little Help From Cable's Friends"

Business Marketing June, 1987 v. 72 no. 6 p. 40 "The Floppy Disk Pitch: Companies Find New Ad Media"

PC Week April 1988 "Ads on Demo Disks Target PC Users"

APPENDIX A

Evaluation Form and Cover Page

EVALFORM.TXT

To: S. Sheila Megley, Provost
Mr. Christopher Kiernan, Academic Dean
S. Leona Misto, Dir Graduate Independent Studies
Mrs. Katherine Miller,Chair: Information Systems Science

From: Michael Thombs
Information Systems Science

Date: 880115

Re: Marketing Diskette for Nova University (Ed.D Program)

Would you please take some time to review a marketing diskette I am having published for Nova University? The diskette will become available to interested parties this February, at the FICC (Florida Instructional Computing Conference). The diskette will constitute the major part of a practicum I am completing for the Doctor of Education in Computer Education Degree. To review the software, you will need access to an IBM-PC/XT/AT with a color terminal and a CGA/EGA/VGA adapter board. When you have toured the media please take a few minutes to complete the evaluation form and jot down any helpful comments that you feel will be constructive. I thank you in advance for the time you spend helping me achieve one more goal in the program.

MET:
Encl 4 Evaluation Forms
Marketing Diskette

EVALFORM.TXT

EVALUATION FORM

Practicum Project for NOVA University

Please take a few moments to jot down some comments and opinions concerning the presentation on computer-based marketing strategy. Your comments will provide me with the feedback I need to complete my first practicum experience at NOVA University.

Thank you.

Name:_____ Date: __/__/__

Title:_____

1) Did you find the ideas and media strategy innovative? Yes__ No__

2) Is this, in your opinion, a useful new marketing strategy? Yes__ No__

3) Was the diskette well structured? Yes__ No__

4) Would you say that the Diskette is easy to use? Yes__ No__

Rate the following A-E, A being the highest rating.

4) Professional quality of the diskette. A B C D E

5) You would be interested in using this technique in your department/ area. A B C D E

6) Do you feel it is worth $1.00 per diskette to produce and distribute. A B C D E

7) There may be more applications for computer-based interactive materials on campus. A B C D E

Comments: _____

_____

_____

_____

_____

APPENDIX B

Maintenance Plan

Maintenance:

The diskette consists of several subdirectories, one for each major functional component of the presentation. The diskette has four functional compartments:

1. The color presentation.
2. The monochrome presentation.
3. Hardcopy of general information.
4. Softcopy(screen) of general information.

The color presentation resides in a subdirectory called ±STORY. In this subdirectory are all the frames(INT##.PIC), the story sequence program(NOVA.SH§), and the IBM-StoryBoard Story Teller program (ST.EXE). Use the Picture Maker (PM) program to change any frame. If you add or detract frames, you will also have to update the NOVA.SH§ sequence program using the Story Editor program (SE).

The monochrome presentation is supported by TTA by Raster Incorporated. All changes to this system component are completed with the TTA development software. Load the software with the TTA command. A series of self explanatory menus will guide you through the update process. All the support modules and picture frames are contained in a subdirectory celled ±PAGES. Change to this directory before attempting any changes.

Both the hardcopy and softcopy data files along with the driver batch programs are contained in a subdirectory called ±BATCH. Data files have the .TXT file extension and batch files have the .BAT file extension. The text/data files are 20 lines in length. The softcopy(screen) display version feeds these files to the screen one at a time. The hardcopy(printer) version links these three at a time with a linefeed and carriage return between each set of three. Each batch file calls the menu program when it completes it intended action. This will restart the diskette allowing the user to select another option. The main menu is displayed from a .TXT file found in the ±BATCH subdirectory. I recommend the use of EDLIN to change any batch or text files. Be sure to erase all .BAK files after you are done with using EDLIN.

APPENDIX C

Original Proposal,

Dr. Al. Mizell
Nova Universtiy

GRANT PROPOSAL #3

"TITLE: "MARKETING VIA COMPUTER DISK"

PROJECT DESCRIPTION:

Rationale:

When marketing a computer-based program, it seems logical that computer-related tools should be used. This is especially true when such tools can be produced at a lower cost than comparable print tools. Ford Motor Company has led the way by sending out MSDOS format computer disks to prospective purchases of their new models. These interactive computer disks can engage the consumer in the product and build an allegiance that isn't possible with ordinary one-way advertising. A similar approach is recommended for the various CBL programs at Nova University.

Assumptions:

1. It is assumed that the planning of an effective marketing disc can be accomplished by a graduate CED student as part of a stipend- supported practicum and as part of their program activities.

2. It is assumed that the total cost for developing and reproducing such a marketing tool will be less than $1/disk.

3. It is also assumed that such programs can be developed in the three most common formats so they will run on Apple DOS, CP/M, or MSDOS.

4. It is further assumed that potential students will have their attention caught by such a marketing tool and be anxious to show it to friends - thus increasing the exposure of our programs.

5. By preparing attractive and informative labels for the disk, it is assumed that even if the recipient reformats the disk, the label will still attract others to the programs at Nova University. The free disk will still be a relatively inexpensive marketing premium for serious inquiries.

6. Since those making inquiry will be asked to write back (return a card) indicating the type of computer they use in order to receive a free disk with further program information, it is assumed that only "serious" inquiries will be sent a disk.

OLD-AL.TXT

PROJECT OBJECTIVES:

General Objective #1: An interactive marketing disk will be produced that covers the major computer-based programs at Nova University and describes their advantages, characteristics, and application procedures as well as the benefits of each degree.

General Objective #2: The resulting interactive program will work in any of three common computer system formats (Apple DOS, MSDOS, and CP/M).

General Objective #3: Student aides will be able to reproduce and label 3,000 of these disks within the next year.

General Objective #4: The disks will be distributed to serious inquires with 2,000 given out at conferences and 1,000 via mail.

ENVIRONMENTAL SCANNING REFERENCES:

Observing the interest displayed by casual viewers of the Ford Motor Company interactive marketing disks and the behavior of participants at professional conference exhibit areas, it appears that a unique marketing tool will be well received. The fact that it is inexpensive and information-packed suggests that it will be an effective tool for marketing directly and it may also market our programs indirectly through journal articles that are likely to be written about this unique approach to marketing. Our computer-based programs have shown steady but slow growth. One of the most common comments heard is that "You have just the program I've been looking for. I just saw a notice about it and couldn't believe it. I've looked everywhere and nobody knew anything about this kind of program being available!"

ALTERNATIVES CONSIDERED:

Printed catalogs, brochures, etc. are currently used. The amount of information they can convey is limited. They will continue to be used, however, because they are traditional and reliable. Printed materials do not offer interactivity and they do not allow you to demonstrate some of the program utilities and features as may be done on a disk. In addition to experiencing simulations of actual UNIX program utilities and typical student work online, inquirers can customize the information they receive by asking for what they want to know in the order in which they want to hear and see it.

OTHER FUNDING SOURCES:

My program budget is the only other source considered. It is a chicken-and-egg issue. I have already committed all of the advertising funds that I can afford with a small student body. I can't attract more students without massive and unique advertising. I need some support to help identify such new marketing tools so when we commit program funds to them in the future, we will be confident that they are worth the expenditure.

PROGRAM STRATEGIES/ACTION:

A graduate student will take on the programming project as a funded practicum. Student aides will duplicate the disks. Office staff will mail disks to inquiries once we know their computer format.

IMPLEMENTATION PROCESS:

1) When the project is approved, we will notify students in the various CED programs that they can apply for a practicum stipend to help support their work in developing the marketing disks. The funds will insure that the products belong fully to Nova University.

2) The CED/CBL staff will plan the labels for the disks and arrange with the Print Shop to have these produced.

3) The student selected will plan the programs with the Ed.D/CED and CBL staff.

4) The preliminary program plans (pseudo-code) will be reviewed by the staff and then coding will occur. A developmental testing student will go through the materials as they are developed and initial revisions will be made.

5) The completed draft version of the program will be tried out by a sample of our online cbl students and appropriate revisions made.

6) Once the disk is approved in all three formats, one or more student aides will be contracted to duplicate the disks and to apply their labels.

OLD-AL.TXT

RESPONSIBILITY:

The Ed.D./CED Director will coordinate the project with the program's assistant managing the details for reproduction, labeling, and mailing as well as provision of the disks at the Nova Booths at appropriate conferences.

PERSONNEL NEEDED:

A graduate practicum student willing to combine program activity and a Nova project plus one or two student aides to do the duplication and labeling.

TARGET DATES:

Once approved in December, 1986, the general guidelines for the marketing effort will be agreed upon by the CED programs director, the CBL Center Director, and the CAE Marketing Staff. The labels will also be designed and submitted to the Print Shop by January 15th.

Planning and programming will occur between January 15, 1987 and April 15, 1987. Disks will be duplicated and labeled between April 15 and May 1, 1987. They will be put into use by June 1, 1987. Evaluations of their value will be collected between June 1 and February 20, 1988.

EVALUATION SCHEME:

Approximately one month after the mailing of each disk, a follow-up questionnaire will be sent for the individual's reactions to the disk and to the program. A similar survey will be sent to a random sample of 1000 inquirers who did not receive the disk. If there is no significant difference between the responding groups and there is no significant difference between the numbers from each group who actually apply within one year, then the least expensive method will be recommended for future use. If a large amount of outside publicity occurs as a result of this approach, it may be continued for its indirect marketing value.

SUNSET PROVISION:

The evaluation results will be summarized within two months after the last of the 1000 disks is mailed. If we did not receive expanded publicity from other sources as a result of using this approach and/or we did not attract more students to the program through its use, then we will consider discontinuing the disk approach. If we also find that we get more positive comments from the printed materials only than we do from those receiving the disks we will definitely discontinue their use.

APPENDIX D

Monochrome Screens

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"@@"
" 22222"
" 2222"
" 22322"
" 22  N O V A  University            "
" 2222"
" 22222"
"@@"
"                Computer-Based"
"                Graduate Programs in"
"                Computer Education"
"                                                "
"   "
"                           Doctor of Education (Ed.D.) in Computer Education."
"@@"
"                           Doctor of Arts in Training and Learning (DATL)."
"@@"
"                           Doctor of Arts in Information Science (DAIS)."
"                           "
"/            /             Educational Specialist (Ed.S.) in  "
"[___________[               Computer-Based Learning."
"[ Press F1 [   "
"[ to QUIT! [               Master of Science (M.S.) in Computer-Based Learning"
"[[[[[[[[[[[[/            "
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"@@"
"     Program Overview"
"@@"
"     Three computer-based graduate degrees in the area of computer"
"     education are available to you through telecommunications:"
"@@"
"        The doctor of education in computer education"
"@@"
"        The educational specialist in computer-based learning"
"@@"
"        The master of science in computer-based learning"
"@@"
"     In addition to these three degree programs in computer education, "
"     Nova University offers two computer-based doctor of arts degrees:"
"          "
"        The doctor of arts in information science"
"      "
"        The doctor of arts in training and learning "
"@@"
"DDDD
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"@@"
"    Study Areas"
"    ----------"
"@@"
"    Each degree program includes the completion of specified formal "
"    study areas.  Each of these study areas, directed by a senior"
"    national lecturer, introduces students to the topic through a"
"    printed study guide and structured online and and offline activities. "
"    Students meet with the national faculty at the institute sessions. "
"    Assignments and questions are submitted electronically to the "
"    faculty.  Exams for the study areas are administered at the "
"    institute meetings. "
"@@"
      You may now take a look at the computer-based programs offered"
    by NOVA University that best match your needs:"
"                        "
"@@"
"                  1.  Master of Science degree programs."
"                  2.  Educational Specialist degree programs."
"                  3.  Doctoral degree programs. "
"                  4.  Q U I T !"
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2000
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"@@"
"                  ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD?"
"                  3         M a s t e r           3"
"                  3                               3"
"                  3        of Science in          3"
"                  3                               3"
"                  3  Computer-Based Learning      3"
"                  @DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDY"
"                                    "
"    With Specialization Areas in     Adult Education (AE)"
"                                     Computer Applications (CAP)"
" ZDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDD?  Computer Education (CED)   "
" 3A Computer-Based Program for3      Electronic Education (EE)"
" 3   Professionals Delivered  3      Information Resource Management (IRM)"
" 3         Through UNIX *      3    Information Systems (IS)   "
" @DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDY  Training and Learning (TL) "
"                                                  "
"                                                        "
"  Nova University                "
"  3301 College Avenue                                                    "
"  Ft. Lauderdale, Florida 33314 "
" DDDDDDDDDDDDDDDDDDDD
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"@@"
"                    ℓ This degree is offered cooperatively by the Center for   ℓ"
"    Courses         ℓ the Advancement of Education and the Center for Computer-ℓ"
"    _______         ℓ Based Learning. ℓ_____________________________________"
"                     ____________________                                     "
"    The courses in the CAP and CED specialties are arranged in three 9-"
"    credit modules.  There is also one 3-credit course and a six-credit"
"    practicum to complete the 36-credit program. ,CAP and CED students  "
"    attend three one-week institutes in Florida during the 18-month pro-    "
"    gram.  A small tuition stipend may be available in these two special- "
"    ties for educators.                                                      "
"                                                                             "
"In the other five specialties (AE, EE, IRM, IS, and T&L), students take a common"
"core of eight three-credit courses during the first year of the program.  They  "
"take two additional courses and a six-credit practicum in the specialty  area   "
"during the last six months of the program.  These students attend two week-long"
"institutes in Florida.                                                       "
"                                                                             "
"    Graduates from any one of these master's degree specializations will be"
"    prepared to apply for the computer-based educational specialist (Ed.S.) or"
"    doctoral degrees (Doctor of Education in Computer Education or the Doctor"
"    of Arts in Information Science or Training and Learning) offered by Nova"
"    University.  "
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"@@"
"@@"
"    Sequence of Instruction"
"    ______________________"
"    Students begin online work as soon as they are accepted into the program."
"    The eight common core courses and the four courses specific to the AE, EE, "
"    IRS, IS, and T&L specialties are listed below (3 credits each)     "
"@@"
"       CBL5501 An Introduction to Digital Computers and Telecommunications"
"       CBL5502 Online Information Systems                                "
"       CBL5503 Statistics, Measurement, and Quality Control                "
"       CBL5505 Database Management Systems                               "
"       CBL5507 The Theory of Human Factors                                 "
"       CBL5508 Systems Analysis and Design                                 "
"       CBL5520 Strategic Management, Leadership, and Finance                "
"       CBL5530 Case Analysis                                                 "
"                                                                            "
"Specialties:  AE and EE: Introductory and Advanced Pascal  "
"              IRM: Telecommunications and Emerging Technologies in IRM     "
"              IS: Plan/Management and Emerging Technologies in IS"
"              T&L: Courseware and Emerging Technologies in CBT                "
"              Practicum Proposal and Report in Specialty Areas       "
"     (Nore: Courses and format are subject to change.)          "
"DDDD
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"    3the specialties offered(i.e. AE,320"
"    3CED, or T&L) or you may choose  320"
"    3to review other administrative  320"
"    3information on the program.     320"
"    @DDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDDY20"
"     222222222222222222222222222222222220"
"@@"
"                          1. ADULT EDUCATION (AE) SPECIALIZATION."
"@@"
"                          2. COMPUTER EDUCATION (CED) SPECIALIZATION.  "
"@@"
"                          3. TRAINING and LEARNING (TL) SPECIALIZATION."
"@@"
"                          4. PROGRAM ADMINISTRATION."
"@@"
"                          5. RETURN to previous menu."
"@@"
"                          6. Q U I T !"
6
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1310
1410
1510
100
1
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0
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"@@"
"@@"
"    (AE) Adult Education Specialization (Overview)"
"    ----------------------------------------------"
"@@"
"  Applications are reviewed each month by the Admissions Committee.  As soon"
"as students are accepted, they begin their online work on an individual basis."
"Nova faculty will provide the student with telecommunications access information"
"and the appropriate study guides for each course.    "
"                                                                              "
"  Students register for two courses every three months.  This means that eight "
"three-credit courses should be completed during the first year in the program."
"Students are expected to attend a one-week institute in Florida during their  "
"first summer in the program (last week in July) and a second institute the next"
"summer.  At the start of their second year in the program, students register   "
"for two specialty courses in the specialization area; in this case the courses"
"are Introductory and Advanced Pascal Programming.  They also register for a six-"
"credit action practicum where they apply the knowledge and skills they have   "
"gained in the use of high technology to help solve a problem in their work     "
"setting.                                                                      "
"  Graduates are eligible to apply for the Ed.D. or D.A. doctoral programs. "
"Graduates should be able to complete the doctoral program in less than the    "
"usual time since there is some overlap between the programs.        "
"    DDDDDDDDDDDDDDDDDDDD
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"@@"
"  Students may apply for this specialization area at any time.  When accepted,"
"they will immediately begin their online orientation to telecommunications.   "
"However, the official starting date is in January with the rest of the Master's"
"students electing this specialization area.  (The group of students is known as"
"a 'cohort.')  Students register for one nine-credit module and a single three-"
"credit course each six months.  Tuition is paid on a quarterly basis.  Two mod-"
"ules are completed during the first year.  The three modules are: 1) Telecom-   "
"munications, 2) Human Factors, and 3) Pascal.  A three-credit course on Soft- "
"ware Quality Assurance and a six-credit practicum on the use of technology in "
"computer education completes the 36-semester hour degree program. "
"  Students in the CED specialty attend a one-week institute every six months  "
"(on campus in Ft. Lauderdale in late July and in Orlando, Florida in late Jan-"
"uary).  Three such institutes are required.  To help offset the cost of the   "
"third institute, a small program stipend may be available to educators.      "
"  Students interested in a compressed (four year) program combining their       "
"master's and doctoral degree in computer education should select this special-  "
"ization area.  It is also valuable for those who prefer more frequent personal  "
"contact than once each year at the summer institutes.                          "
"                                                                                "
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"@@"
"@@"
"    (TL) Training and Learning specialization     "
"    ------------------------------------------     "
"@@"
"      Trainers in business and industry should select this option in which"
"    they take the same eight common core courses as the students in the AE    "
"    specialty.  During the second year, they will take two specialty courses"
"    in the training and learning field and complete their six-credit prac-"
"    ticum in this specialty area.                                              "
"                                                                                "
"      Students may apply and be accepted any month of the year.  They will "
"    begin their coursework as soon as they are accepted.  These students      "
"    will attend a summer one-week institute during the first summer they "
"    are in the program and again during the next summer.  This is usually     "
"    during the last week of July on campus in Fort Lauderdale.                 "
"                                                                               "
"      An interesting aspect of the M.S. CBL degree is the use of the Elec-     "
"    tronic Classroom when all students in the course join their instructor  "
"    at a preset time for 'live class sessions' online.  Graduates will be     "
"    eligible to apply for the Ed.D. or D.A. dostoral programs when they "
"    graduate.                                                                  "
"    DDDD
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"    Application fee                $30,00 (nonrefundable)"
"@@"
"    Tuition-Master's level         $3000/year or $125/credit hour"
"@@"
"    Registration fee               $15.00 per three-month term"
"@@"
"    Online fee                     $140.00/20-hour packet ($7.00/hour)"
"                                              per three-month term"
"@@"
"    Late registration fee          $25.00 if tuition is not received by due date"
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"@@"
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"                          NOVA UNIVERSITY"
"@@"
"                 GRADUATE PROGRAMS IN COMPUTER EDUCATION"
"@@"
"@@"
"                     Educational Specialist (Ed.S.)  "
"                                  in  "
"                        Computer-Based Learning"
"@@"
"@@"
"                          Specializations in:"
"                        ZDDDDDDDDDDDDDDDDDDDDDDDDD?"
"                        3      Adult  Education    3"
"                        3  Electronic  Education  3"
"                        3  Training and Learning  3"
"                        @DDDDDDDDDDDDDDDDDDDDDDDDDY"
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"@@"
"@@"
"    Courses and Study Areas"
"    ______________________"
"    The four major components in the Ed.S. program are:"
"@@"
"       Three  online  study  areas  (6  credits  each)"
"       Four three-credit courses in the specialty area"
"       Three one-week institutes  during  the  program"
"       Completion of a formal practicum. "
"@@"
"    There are three study areas and four separate  courses  in the  Ed.S."
```

```
"     program.  Each  study  area  consists  of  two three-credit  courses."
"     Students also select a specialty area consisting of four three-credit "
"     courses.  There are two specialities in the computer  education area:"
"@@"
"        Adult Education"
"        Electronic Education "
"@@"
"     Students may also select a third specialty offered by the Center for"
"     Computer-Based Learning. "
"                              "
"        Training and Learning"
"@@"
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"@@"
"@@"
"     Institutes"
"     __________"
"     All  educational specialist students meet at a formal week-long"
"     institute every  six  months  for  the year and one-half of the "
"     program.  Each student must attend  three institutes during the"
"     eighteen-month program.  Depending upon when the student begins"
"     the program, this means attending  one  summer  and  two winter "
"     institutes or one winter and two summer institutes.  The winter "
"     institute is held at the site of the Florida Instructional Com-"
"     puting Conference (usually in Orlando, Florida) in  January  or"
"     February  for six  days.  This usually  involves  missing  four"
"     days  of  work.  The  summer  institute is  held  on  the  Nova "
"     University main campus in middle to late July for a period of 9"
"     days (including two weekends).  Study areas begin approximately"
"     one month prior to each institute, and conclude with an exam at"
"     the institutes. Networking with colleagues and professionals in "
"     the field also takes place at the institutes and is an  import- "
"     tant element of the program.  "
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"@@"
"                                  FIRST YEAR"
"                               (24 semester hours)"
"        ZDDD
```

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"          3                                                              303"
"          3  CED 7721 - Educational Research and Evaluation             303"
"          3                                                              303"
"          3  CED 7722 - Applications of Educational Research and Evaluation  303"
"          3  (One Winter/Summer Institute (January/July) in South Florida)  303"
"          @DDDD
```

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"@@"
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"@@"
"                Two-Year Summary of the Adult Education (AE) Specialty"
"                ------------------------------------------------------"
"@@"
"     Year     Term                                                    "
"    Z____DDDD____DDDD
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"@@"
"@@"
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"@@"
"                Two Year Summary of the Electronic Education Specialty          "
"                ------------------------------------------------------          "
"@@"
"     Year     Term                                                              "
"    Z____DDDD____DDDD
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"@@"
"@@"
"     Program Administration"
"     ----------------------"
"@@"
"     FEES and TUITION POLICY (as of 1987 - 1988)          "
"     ÐÐÐ
```

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"@@"
"  ZDDD
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"    Professional Experience Project (PEP)"
"    ______________________________________"
"    Each student must plan an individual professional growth and"
"    dissemination experience project and have it approved.  It "
"    must contain the equivalent of participation at two annual"
"    conferences of a major professional association related to "
"    computer-based learning including presentations and service"
"    to the profession.  It must also incorporate other activities          "
"    designed to enable the student to grow professionally. "
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"@@"
"    Summer and Winter Institutes"
"    ____________________________"
"    All students are brought together from across the country to      "
"    meet in Florida twice a year for one-week institutes.  Each "
"    summer and winter, a formal institute is held in South Florida"
"    for at least a full week (up to nine days) to complete the "
"    following activities:"
"@@"
"      Presentations"
"      Completion of Exams"
"      Informal Interactions"
"      Seminar Activities in New Areas"
"      Lectures"
"      Discussion "
"                 "
"    Emphasis at the institutes  is on  the key  issues in  computer "
"    education.  Students are required to provide their own lodging,"
"    meals and travel expenses for these institutes. "
"                          "
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"@@"
"@@"
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"@@"
"    Practicums"
"    __________"
"    Practicums are applied research projects designed to promote"
"    solutions to current problems in the student's institutions"
"    or their professional field through the application of micro-"
```

```
"    computers and/or telecommunications.  Students must success-"
"    fully complete three practicums.  The third practicum is the"
"    major practicum; it is broader scope and impact than the first   "
"    two. "
"@@"
"    Programming Proficiency"
"    ______________________"
"    It is the responsibility of each student, during the first two "
"    years of the program, to acquire--outside the program--and to"
"    be able to demonstrate competency in advanced BASIC and intro-"
"    ductory Pascal programming.  This must be completed prior to "
"    registering for Study Area #7(Advanced Structured Programming)"
"    in the student's third year. "
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"@@"
"@@"
"    Doctor of Education in Computer Education (ED.CED)"
"@@"
"    Summary"
"    _______"
"    The doctor of education in Computer  education (Ed.D.) program  accepts"
"    educators and trainees holding a master's degree  and  with  sufficient"
"    computer literacy to operate a word  processor.  The  Ed.D. is a three-"
"    year program consisting of 72-semester hours.  Up to six semester hours"
"    may  be  transferred into the Ed.D.  program  if they are recent and of"
"    doctoral level. The major components of the Ed.D. program are:"
" ZDDD
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```
"       Computer-Based Research and Statistics for Information Science"
"@@"
"       Strategic Management for Libraries and Information Centers"
"@@"
"       Telecommunication, Networking, and Computer Applications in "
"        Information Science"
"@@"
"       Systems Analysis, Systems Design, Ooperations Research, and"
"        Computer Simulation in Information Science"
"@@"
"       Database Management Systems, Text Processing, and Information"
"        Retrieval"
"@@"
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"@@"
"    Doctor of Arts in Training and Learning"
"    ______________________________________"
"    The D.A.T.L. program is based on the premise that training personnel"
"    today are managers of information.  In this context, their role has"
"    been similar to the information scientist.  Students in this program"
"    take a core of courses in information science that is similar to the"
"    DAIS program.  The first part of the program involves the student in  "
"    the following:"
"@@"
"       Digital Computers for Management"
"@@"
"       Computer-Based Research and Stastics for Information Science"
"@@"
"       Database Management Systems, Text Processing, and Information"
"        Retrieval"
"@@"
"@@"
"@@"
"@@"
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"@@"
"@@"
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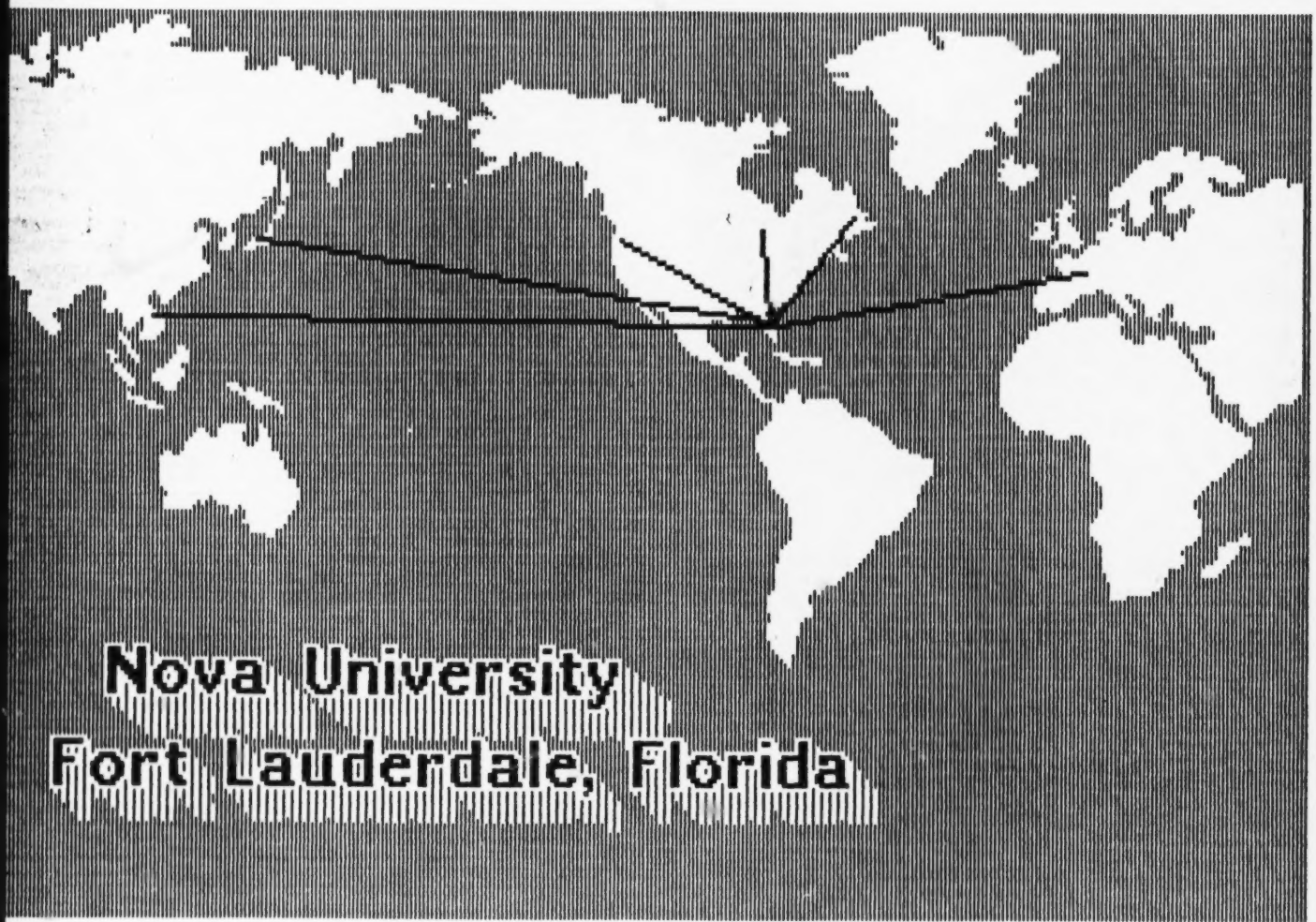
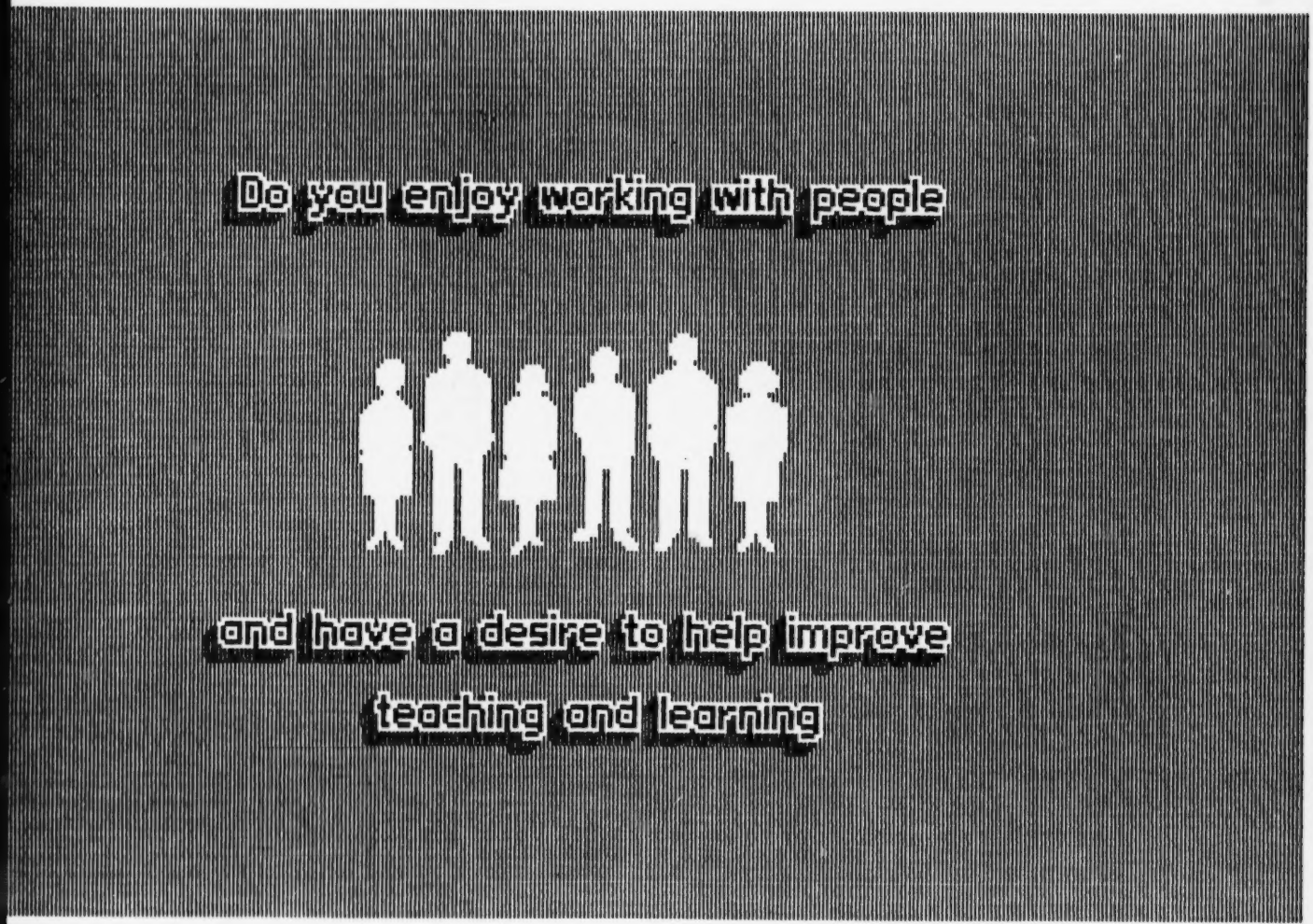
"@@"
"    D.A.T.L. (Continued)"
"    ____________________"
"    The second part of the DATL program focuses on cultivating the "
"    skills needed by today's training professional. "
"@@"
"    The new demands on specialists in the computer-based training      "
"    field require them to collect the RIGHT information and package    "
"    it in a form that leads to effective training programs. Courses   "
"    in the specialty include the following: "
"@@"
"       Instructional Systems in Training and Learning"
"@@"
"       Human Factors in Software and Courseware Design"
"@@"
"       Software and Courseware Design for Computer-Based Learning"
```

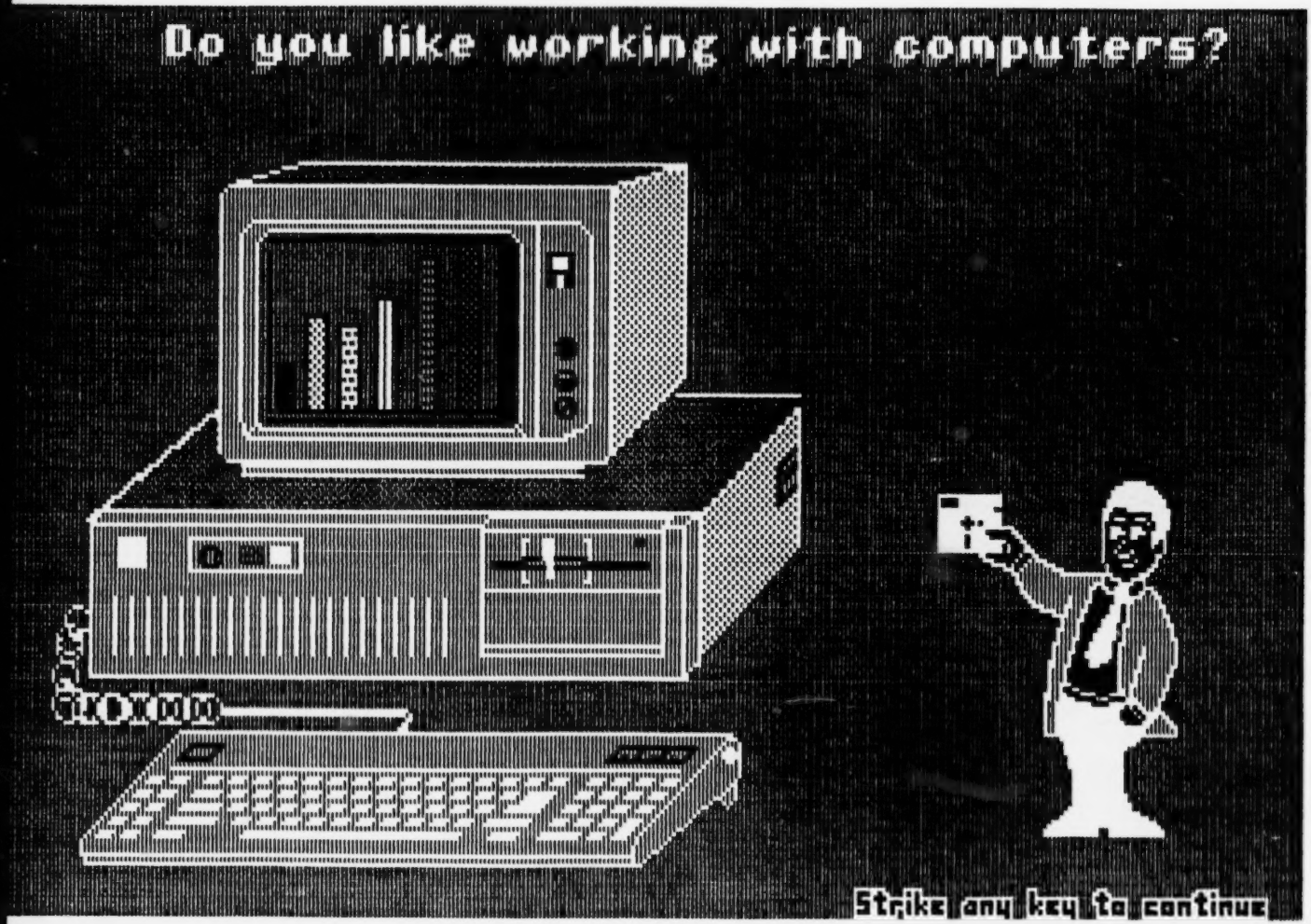
```
"@@"
"     As in the DAIS program, the students are required to complete "
"     four practicums, a major field project, and a comprehensive"
"     examination.  In-person seminars, as well as , online presentations"
"     are given. "
"@@"
"@@"
3500
20
"Great !"
"VERY GOOD !"
"CORRECT !"
"YES !"
"FINE !"
"GOOD, Let's continue"
"Correct ! Let's continue"
"Good Work, try another . . ."
"RIGHT !"
"GOOD WORK !"
"Close, but not quite right."
"almost...but another answer is better"
"very close . . ."
"almost . . . Let's review."
"NO, not correct."
"Incorrect !"
"That's Not Correct."
"No, let's review"
"Wrong, let's review"
""
200,0
```

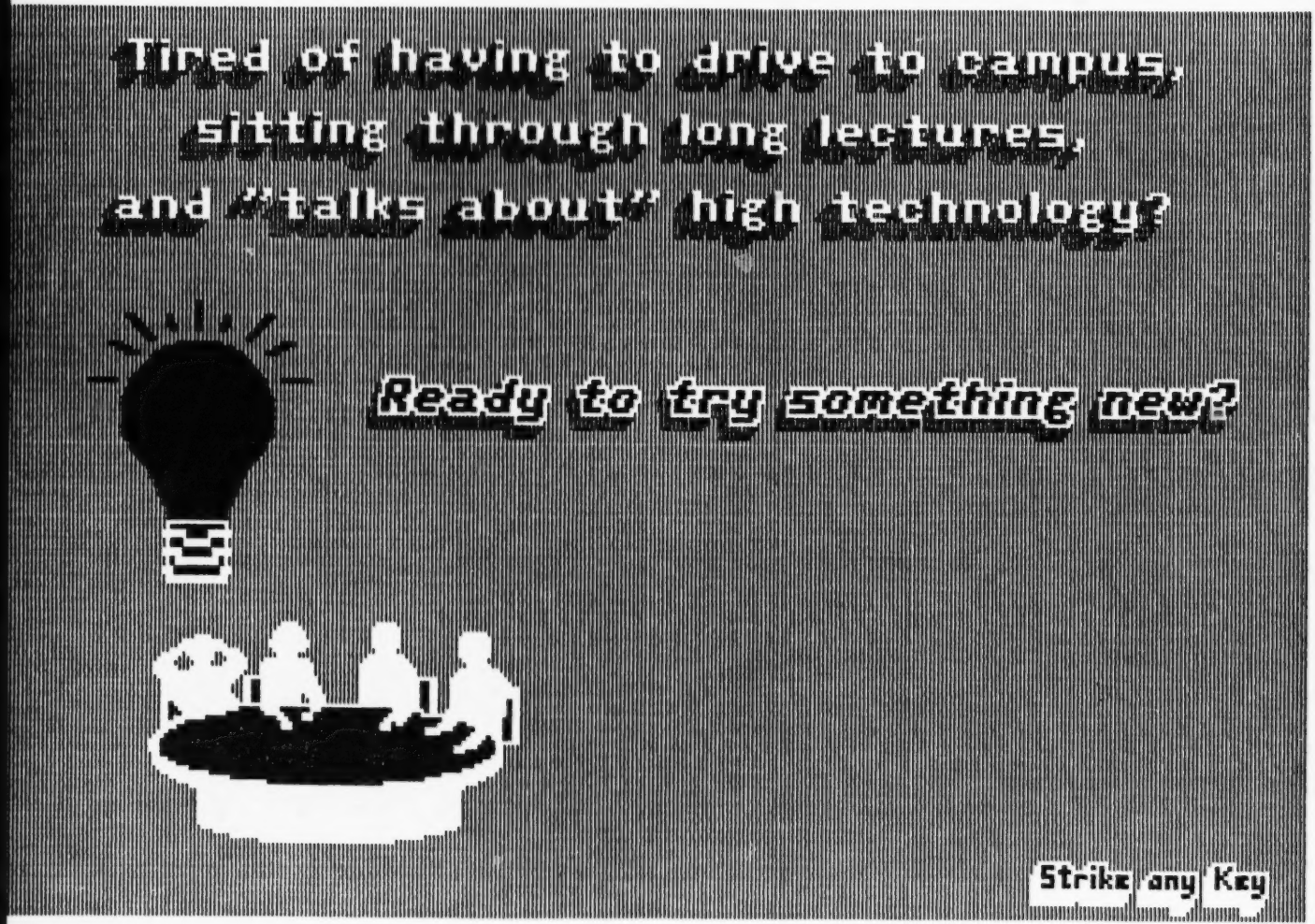
APPENDIX E

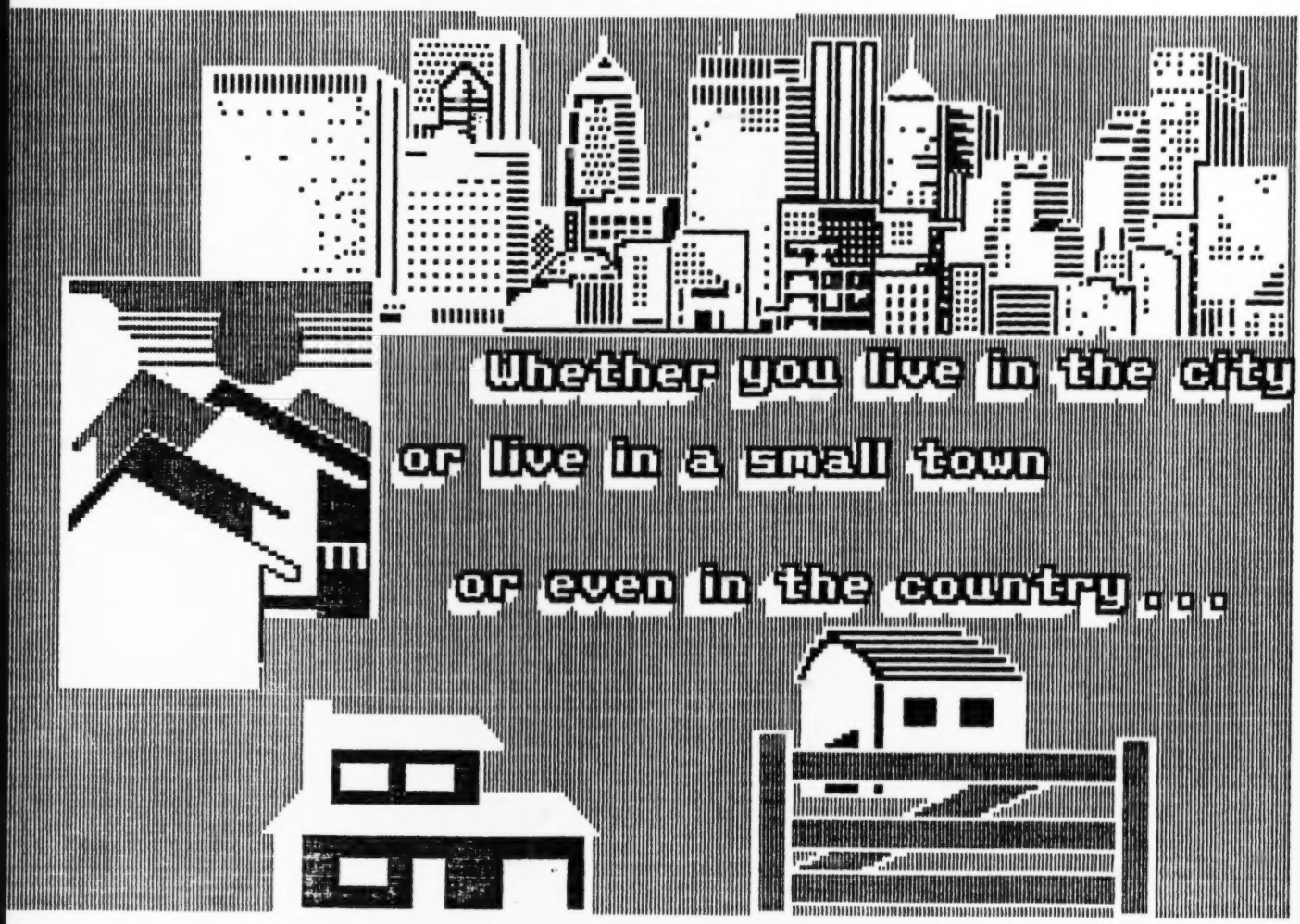
Color Screens

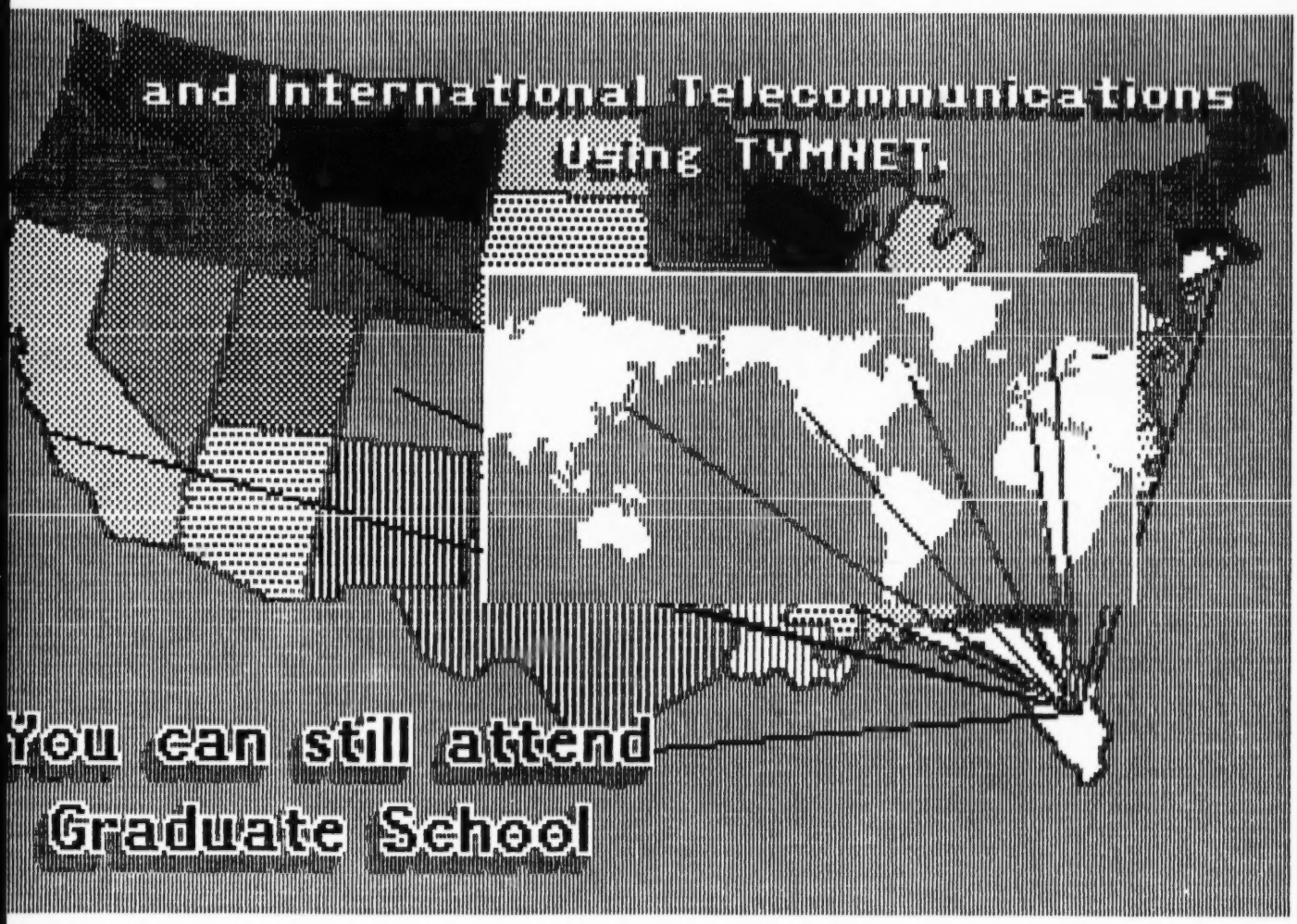

Nova University
Fort Lauderdale, Florida

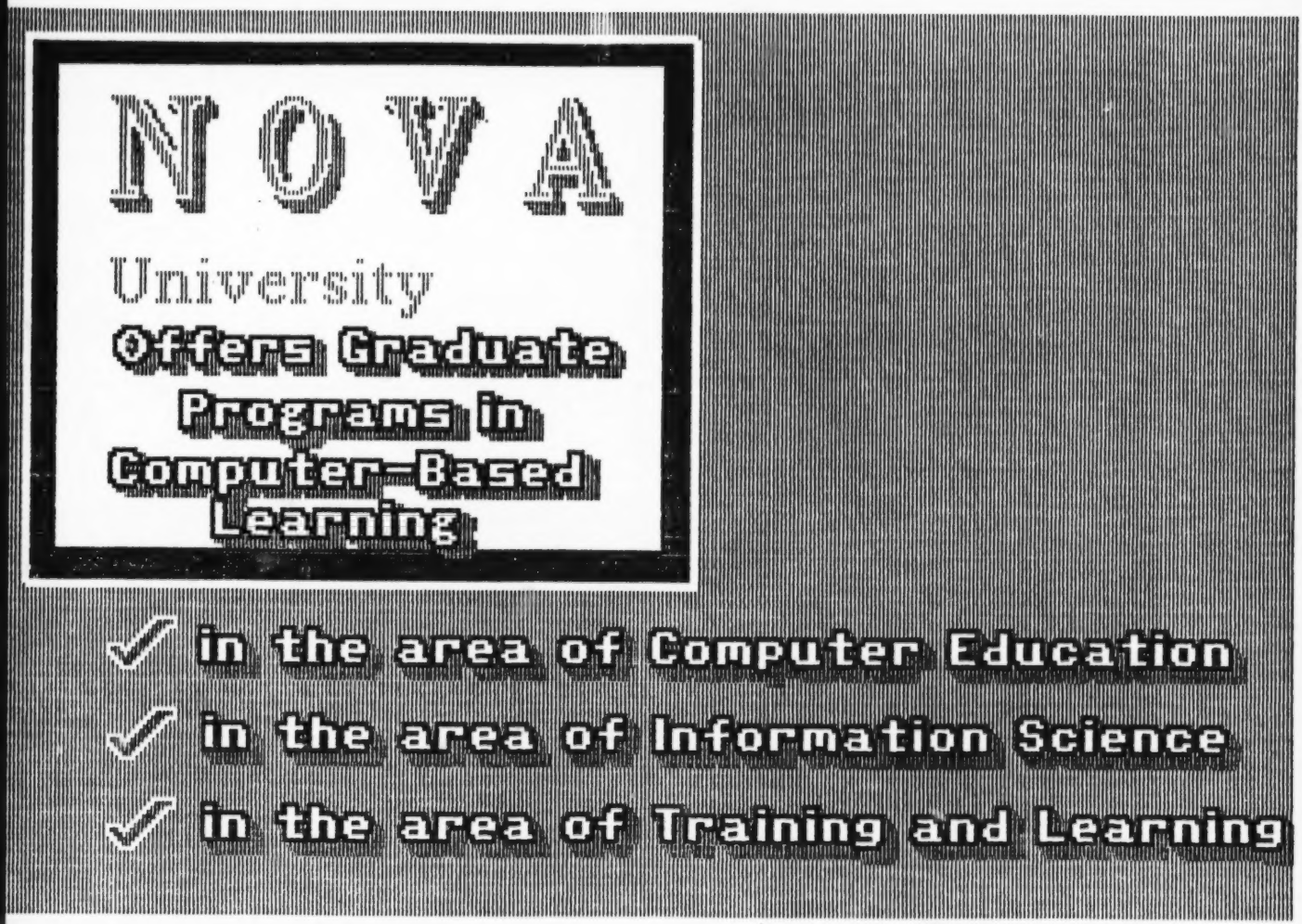

Do you enjoy working with people
and have a desire to help improve
teaching and learning

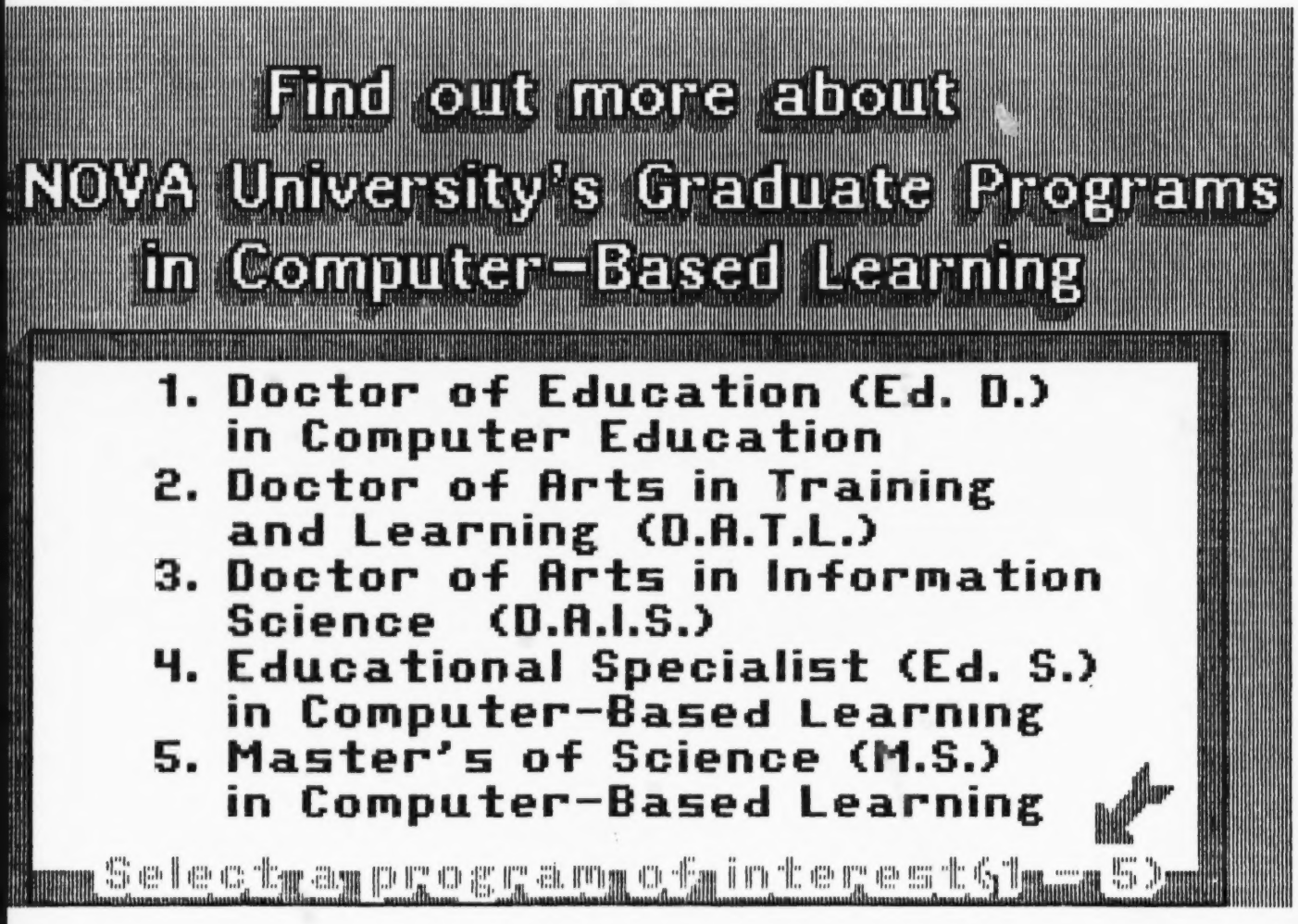

Do you like working with computers?
Strike any key to continue

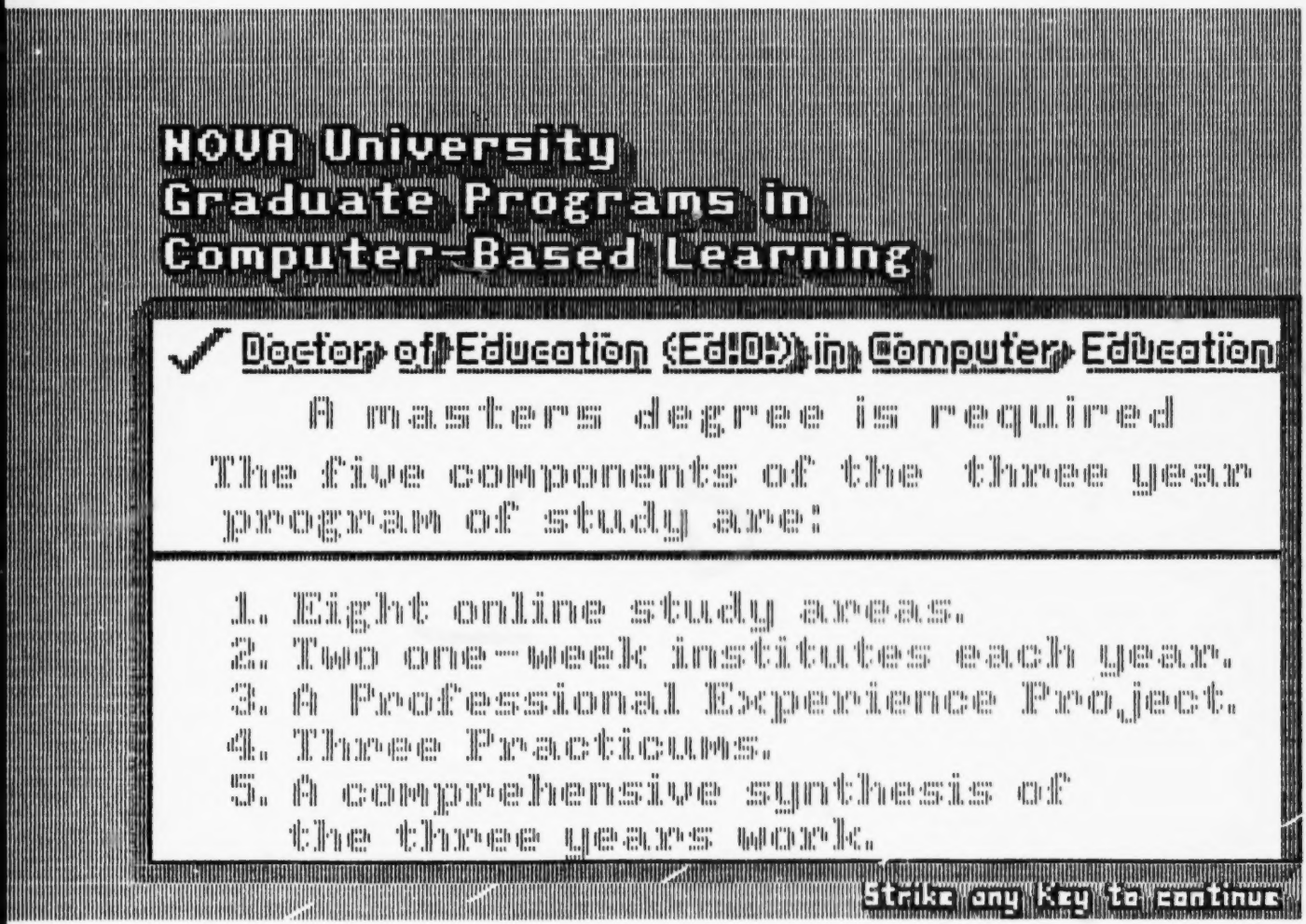

Tired of having to drive to campus,
sitting through long lectures,
and "talks about" high technology?
Ready to try something new?
Strike any Key

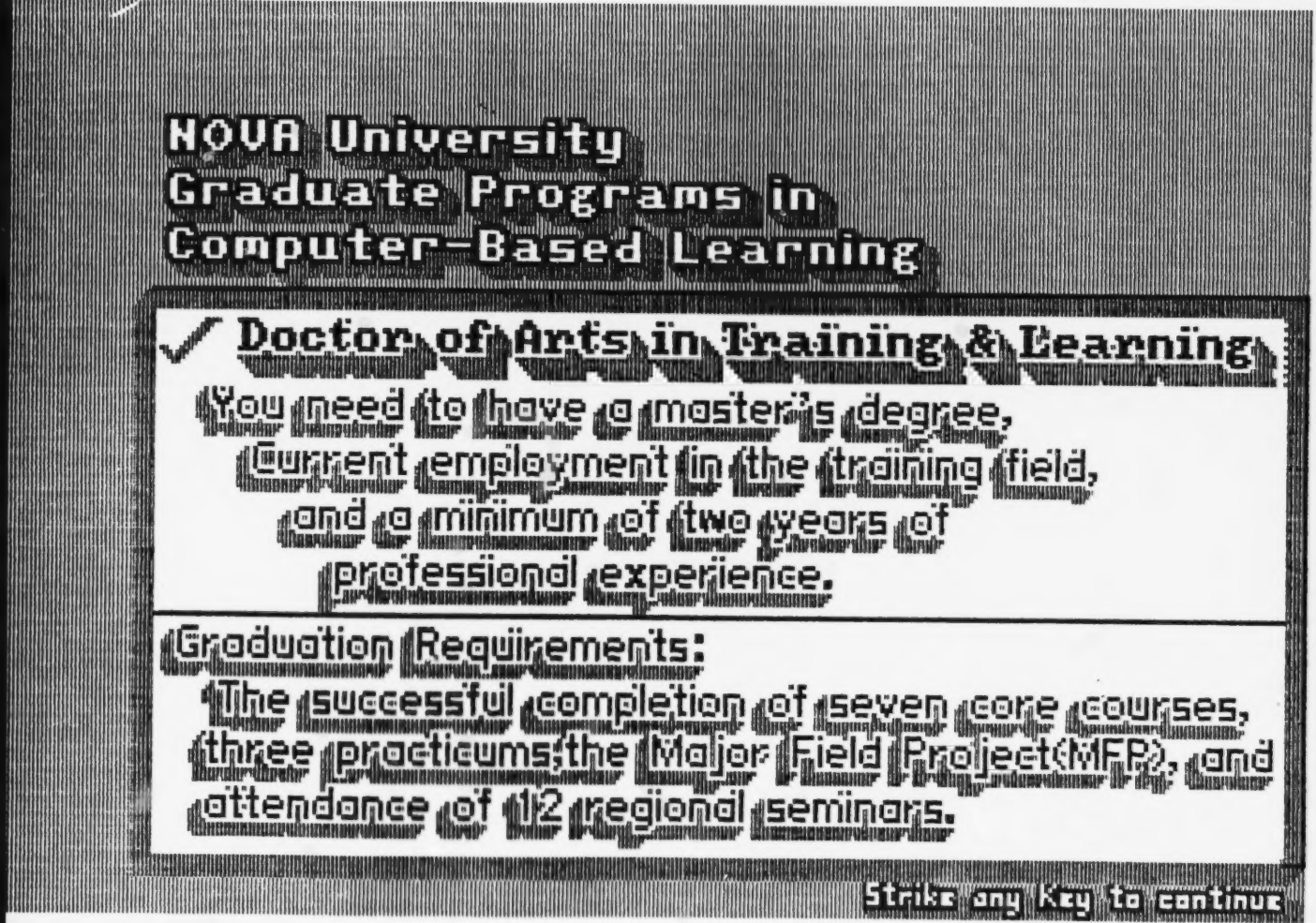

Whether you live in the city
or live in a small town
or even in the country...

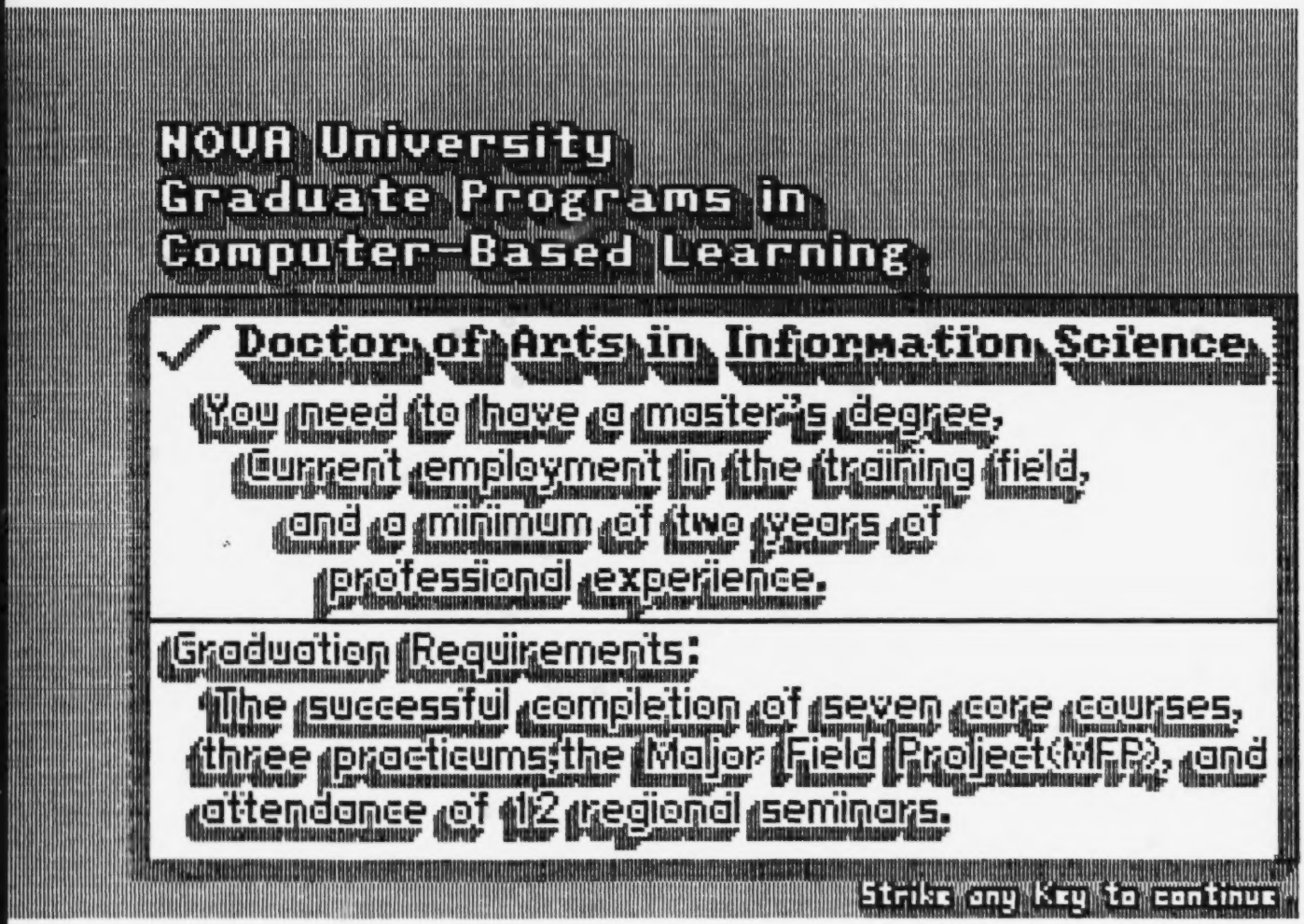

and International Telecommunications
Using TYMNET.
You can still attend
Graduate School

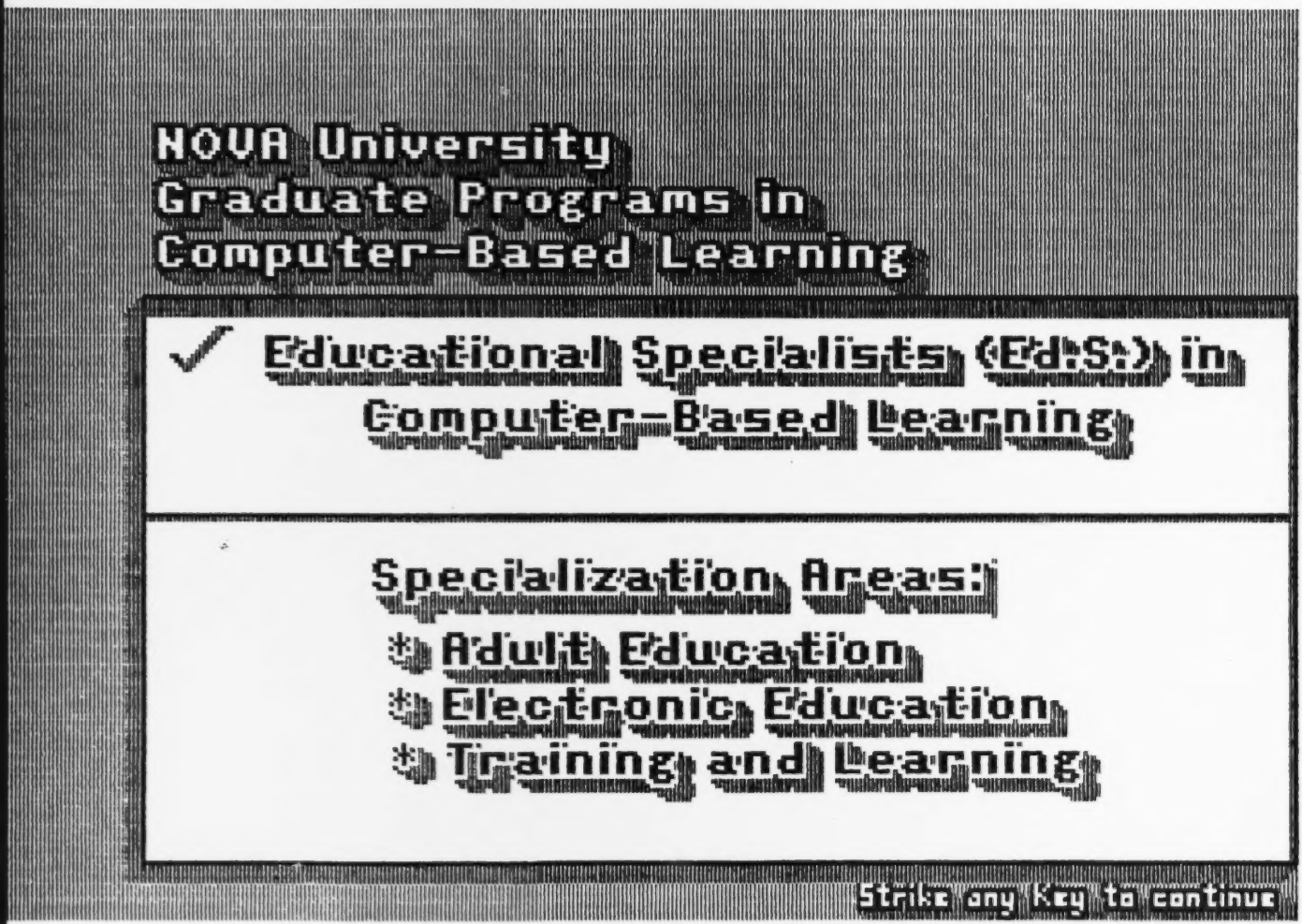

NOVA
University
Offers Graduate Programs in Computer-Based Learning
in the area of Computer Education
in the area of Information Science
in the area of Training and Learning


Find out more about
NOVA University's Graduate Programs
in Computer-Based Learning
1. Doctor of Education (Ed. D.)
in Computer Education
2. Doctor of Arts in Training
and Learning (D.A.T.L.)
3. Doctor of Arts in Information
Science (D.A.I.S.)
4. Educational Specialist (Ed. S.)
in Computer-Based Learning
5. Master's of Science (M.S.)
in Computer-Based Learning
Select a program of interest (1-5)

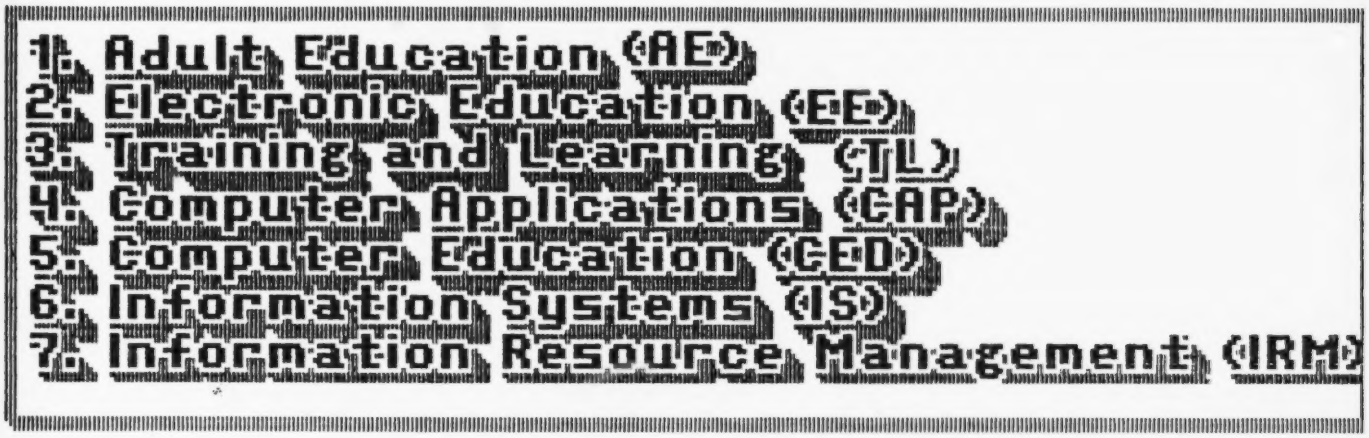

NOVA University
Graduate Programs in
Computer-Based Learning
✓ Doctor of Education (Ed.D.) in Computer Education
A masters degree is required
The five components of the three year program of study are:
1. Eight online study areas.
2. Two one-week institutes each year.
3. A Professional Experience Project.
4. Three Practicums.
5. A comprehensive synthesis of the three years work.
Strike any Key to continue


NOVA University
Graduate Programs in
Computer-Based Learning
✓ Doctor of Arts in Training & Learning
You need to have a master's degree,
Current employment in the training field,
and a minimum of two years of
professional experience.
Graduation Requirements:
The successful completion of seven core courses,
three practicums;the Major Field Project(MFP), and
attendance of 12 regional seminars.
Strike any key to continue


NOVA University
Graduate Programs in
Computer-Based Learning
✓ Doctor of Arts in Information Science
You need to have a master's degree,
Current employment in the training field,
and a minimum of two years of
professional experience.
Graduation Requirements:
The successful completion of seven core courses,
three practicums;the Major Field Project(MFP), and
attendance of 12 regional seminars.
Strike any key to continue


NOVA University
Graduate Programs in
Computer-Based Learning
✓ Educational Specialists (Ed.S.) in
Computer-Based Learning
Specialization Areas:
* Adult Education
* Electronic Education
* Training and Learning
Strike any Key to continue

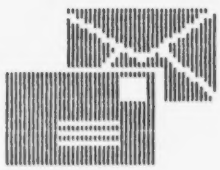
Master of Science in Computer-Based Learning


1. Adult Education (AE)
2. Electronic Education (EE)
3. Training and Learning (TL)
4. Computer Applications (CAP)
5. Computer Education (CED)
6. Information Systems (IS)
7. Information Resource Management (IRM)

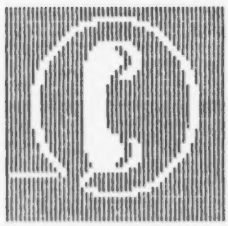
Programs consist of 8 courses in the first year with a practicum and two courses in the specialty in the second year.

Strike any key to continue

For additional information, you may:



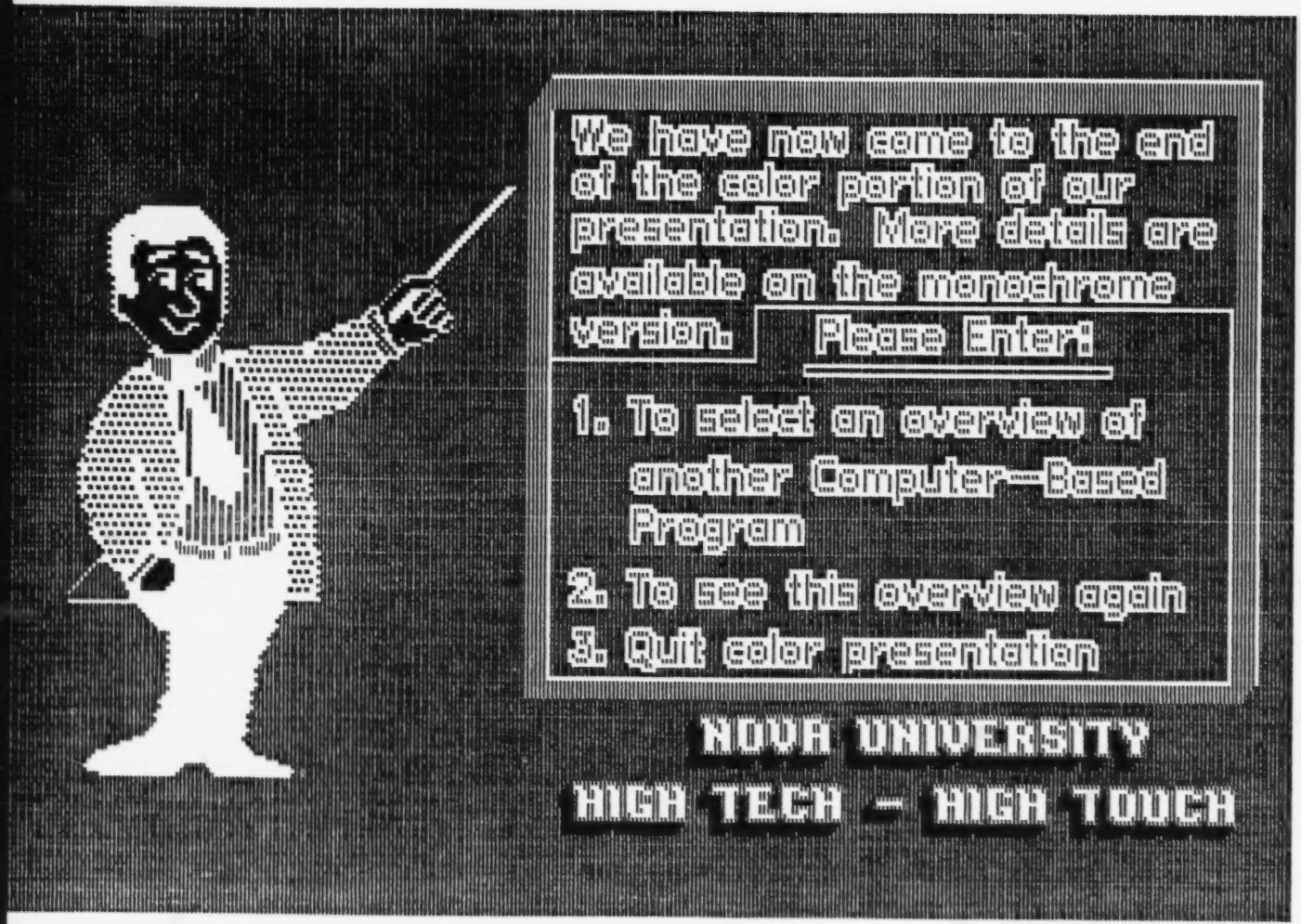
Nova University
Center for the Advancement
of Education
3301 College Avenue
Ft. Lauderdale, Florida



call 475-7440
and ask for:

More information concerning
Computer-Based Programs

Strike any key to Continue


We have now come to the end of the color portion of our presentation. More details are available on the monochrome version.
Please Enter:
1. To select an overview of another Computer-Based Program
2. To see this overview again
3. Quit color presentation
NOVA UNIVERSITY
HIGH TECH - HIGH TOUCH

APPENDIX F

Hardcopy Listing

What is "Computer-Based Learning?"

Imagine that you are coming in your front door after a long, hard day at work. As you settle down in your favorite chair, you suddenly remember that this is one of your class nights and you'll have to bolt down your dinner and quickly hit the road to class. Oh well, you can "relax on the interstate" as you head for class.

Of course, there is another way. The previous scenario could have started out the same way - but as you settled down in your chair, you could have sighed, "Boy, I'm sure glad I can relax and eat in peace before I move over to my computer at the desk to get online for my class tonight!"

In Nova University's computer-based graduate programs, almost any evening or weekend, you could find a number of our more than 200 students across the country engaged-in this second scenario. They are using modern technology to take some of the stress out of their graduate study.

They work just as hard as traditional graduate students - but their energy can be put into their studies - not in getting to and from classes. Instead of "hitting the road" for class,these modern students sit down at their home computer, and use their modem to dial a local number on their regular telephone line to Tymnet;this is an international packet switching network that then connects them into Nova University's VAX 11-780 running the Berkley 4.2 version of the UNIX* operating system. After loging on, what sort of things might you, as one of our "electronic students," do?

On a typical evening, as a student in one of the computer-based master's, specialist, or doctoral programs, you might check to see what electronic mail (email) had arrived for you, save the messages you want to keep in a sub-directory and reply (using a single keystroke) to those asking you a question. Then you might upload a 1500-word paper that you had prepared offline for an assignment in one of your courses. Next, you e-mail your assignment to your instructor in "the Electronic Student" (ES). ES automatically sends a notification to the faculty member,preserves a copy of the assignment in an archive, and updates your student records. You then send a question to the instructor about the "Electronic Classroom Session" (ECR) that is scheduled for this Sunday afternoon when you and all of your classmates will be on-line to interact in realtime as your give your five-minute "oral report" to the rest of your class and your instructor. Of course, they then get a chance to ask you questions in "real time." That's how it becomes a "live" discussion.

* UNIX is a trademark of AT&T Technologies and Bell Labs

What degree programs are available to you now? Although you need to request a copy of the current prospectus/application packet and the catalog for details on the particular programs of interest to you, here are some of the general highlights:

You need to own or have access to a personal computer (almost any make) and modem for evening/weekend access. You should be able to use a word processor. You can transfer up to six credits (taken after your last degree) if they were taken at an accredited institution within the last ten years with a grade of "B" or better and they parallel content in the degree program you plan to join. You can expect to put in an average of 1-2 hours work on your program each night on the average. Generally, students tend to mass their work and put in longer periods once or twice a week. They usually check-in online for their mail every second or third evening and on the weekend. Although many of the additional readings and articles you need are provided or you can search for them online, you still need access to a suitable library in your area for reference work.

To apply for one of these programs, you should look in the Prospectus/Application packet for the particular program of interest to you. Near the end of the packet, you will find several blank forms. Fill-out and return the application form, request official transcripts of your prior college work, and arrange for three letters of recommendation - using the forms provided. Of great importance are your answers to the series of questions provided in the section known as the "Portfolio." This is a series of questions where we get to see your ability to use a word processor, the quality of your written communication skills, and how well prepared you are to handle this type of graduate work. You need to be aware that in a self-paced, distance learning program, you must be a self-disciplined, motivated individual and able to handle frustration that frequently accompanies the use of high technology...in programs that are on the "cutting edge" - as these tend to be.

Once your application materials arrive and are reviewed, you will be notified of your status. In the case of the Ed.D. and the Ed.S. programs (including the combination M.S./Ed.D.), an oral interview (by telephone) will be scheduled for you if you are being considered for acceptance. If you don't hear from us within two weeks, please call collect to check on the status of your application. In applying for the M.S. program, a decision on admissions will be made based upon the materials submitted and your prior academic record. You will then be able to officially begin the program on the first of the next month after you have been accepted. In the CAP and CED specialty options, someone from the central office will also call to discuss your application with you. Students in these two options begin their online orientation sessions as soon as they are accepted; they do not officially register until the next institute (January or July). However, even during the orientation period, you will be allowed to start working on your first class assignments.

Tuition tends to change each year in about the same amount as the cost of living. Consult the appropriate catalog or prospectus for the current tuition and fees. The doctoral and Ed.S. tuition includes approximately 100 hours of online time each year. The M.S. tuition is lower but students purchase all of their online hours. Thus, the overall costs are comparable. The institutes represent an extra cost for travel, room, and board ... depending upon how far you travel. However, in all cases, the total costs should be similar to the total direct and hidden costs involved if you have to take time off from work for travel and residency in a more traditional program.

If your highest earned degree is a master's degree (from an accredited institution), you have a choice of advanced programs offered through our Center for the Advancement of Education. You can apply to enter the doctor of education in computer education (Ed.D./CED) three-year degree program or you can select the 1 1/2 year educational specialist degree in computer-based learning (Ed.S./CBL). Our Center for Computer-Based Learning also offers the doctor of arts degree in information science, information systems, and training and learning.

If your highest degree is a bachelor's degree, then you can apply to begin either of these programs:

- The eighteen-month master of science degree program with a major in computer-based learning (MS/CBL). You also select one specialty area from these seven options:

Adult Education (AE)	Information Resources
Computer Applications (CAP)	Management (IRM)
Computer Education (CED)	Information Systems (IS)
Electronic Education (EE)	Training and Learning (TL)

The CAP and CED options tend to provide greater human contact because these students attend three institutes along with the doctoral students. There is a greater probability that students in these options will decide to continue on for their Ed.S. or Ed.D. degree in computer education. (There is also a slight partial tuition scholarship for selected educators in these two options that may help offset the cost of the third institute). The AE option is geared toward college and university faculty and administrators; the EE option is designed for K-12 educators. The other three options are operated by the Center for Computer-Based Learning.

- The compressed, (i.e. less than four years) combination masters/doctoral program in computer education (M.S./Ed.D.). (This compressed program is designed for exceptional individuals who feel motivated to pursue their doctorate but they do not hold a master's degree. They must be able to work independently, in a highly concentrated and focused manner to finish a program that combines the master's and doctoral work in one intensive program of study. Although designed to reduce the time it would normally take to complete the masters (1 1/2 years) and the doctorate (3 years) to a total of four years, it is conceivable that it may be done even more rapidly by some individuals).

****

The following are program highlights for the computer-based programs offered through the Center for the Advancement of Education excerpted from the various publications so you can compare them in one place ...

ENTRY REQUIREMENTS

	Ed.D./CED	Ed.S./CBL	M.S./CBL	M.S./Ed.D.
Prior degree:	Master's	Master's	Bachelor's	Bachelor's
Planned program length:	3 years	18 months	18 months	< 4 years

ENTRY REQUIREMENTS (Continued)

	Ed.D./CED	Ed.S./CBL	M.S./CBL	M.S./Ed.D.
Number institutes:	6	3	3 in CAP and CAE options; 2 in all others	7
Number credits:	72	36	36	96
Transfer credits:	6	6	6	6
Experiential credits:	-	3	3	3
Number of practicums:	3	1	1	3

Please contact us at Nova University if we may answer any questions for you or you would like current information on any of our computer-based programs.

Dr. Al P. Mizell
Nova University - CED
3301 College Avenue
Fort Lauderdale, Florida
33314

Phone: (305) 475-7445 or 7440

(12588)

APPENDIX G

Evaluation Summary

EVALUATION FORM

Summary

Practicum Project for NOVA University

A summary of 22 evaluations of the Nova University diskette.

1) Did you find the ideas and media strategy innovative? Yes18 No_4

2) Is this, in your opinion, a useful new marketing strategy? Yes20 No_2

3) Was the diskette well structured? Yes17 No_5

4) Would you say that the Diskette is easy to use? Yes20 No_2

Rate the following A-E, A being the highest rating.

		A	B	C	D	E
4)	Professional quality of the diskette.	18	4	0	0	0
5)	You would be interested in using this technique in your department/ area.	16	5	1	0	0
6)	Do you feel it is worth $1.00 per diskette to produce and distribute.	22	0	0	0	0
7)	There may be more applications for computer-based interactive materials on campus.	n	/	a		

Comments:

The author's name should be accredited somewhere on the diskette if it is to be used for Nova.

Some typos in the monochrome version.

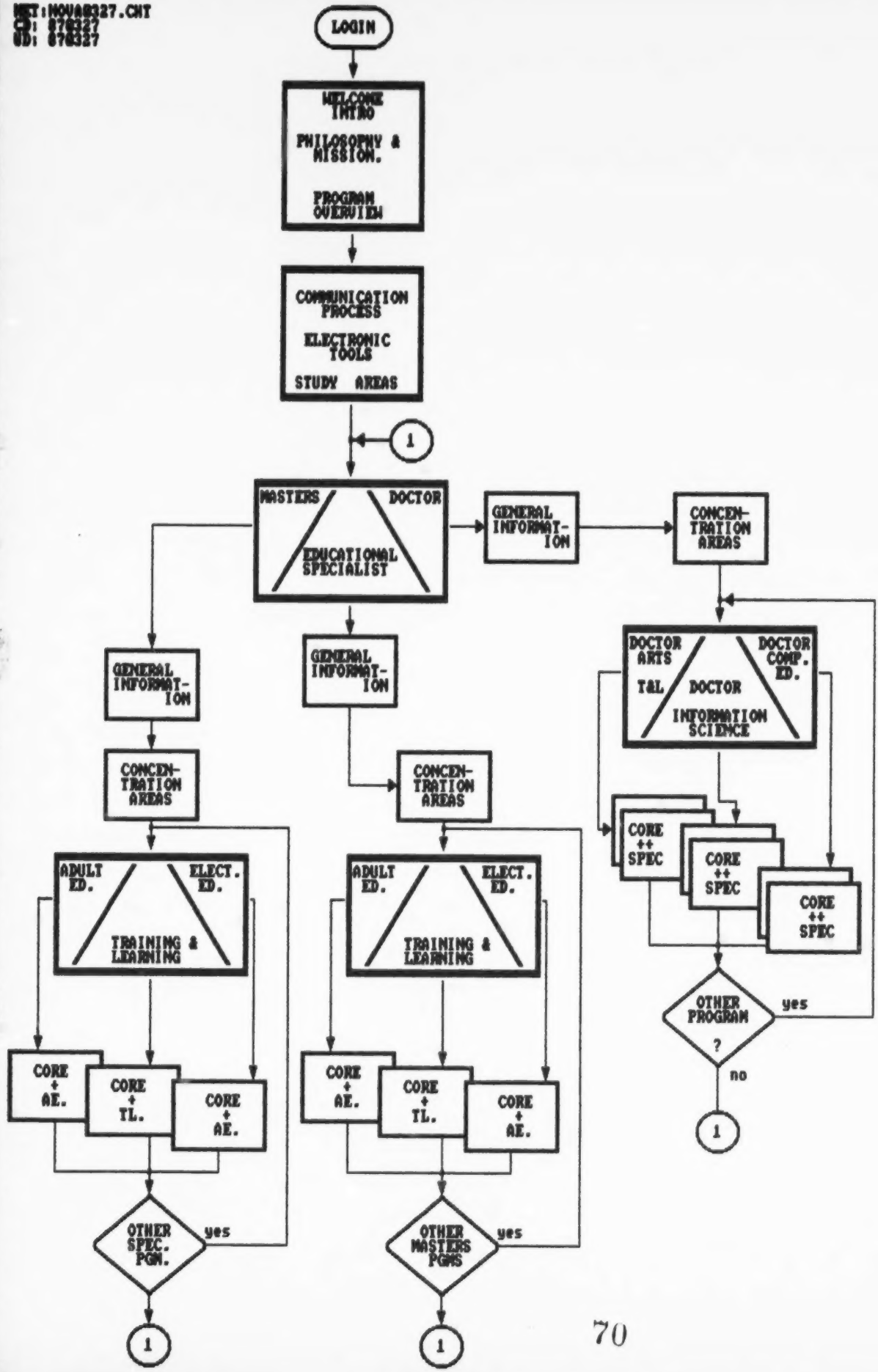
Color version should be able to run by itself, in a loop for demo purposes.

Colored diskettes would be appropriate. .39/each.

Write protected diskettes would prevent people from re-using them (as quickly).

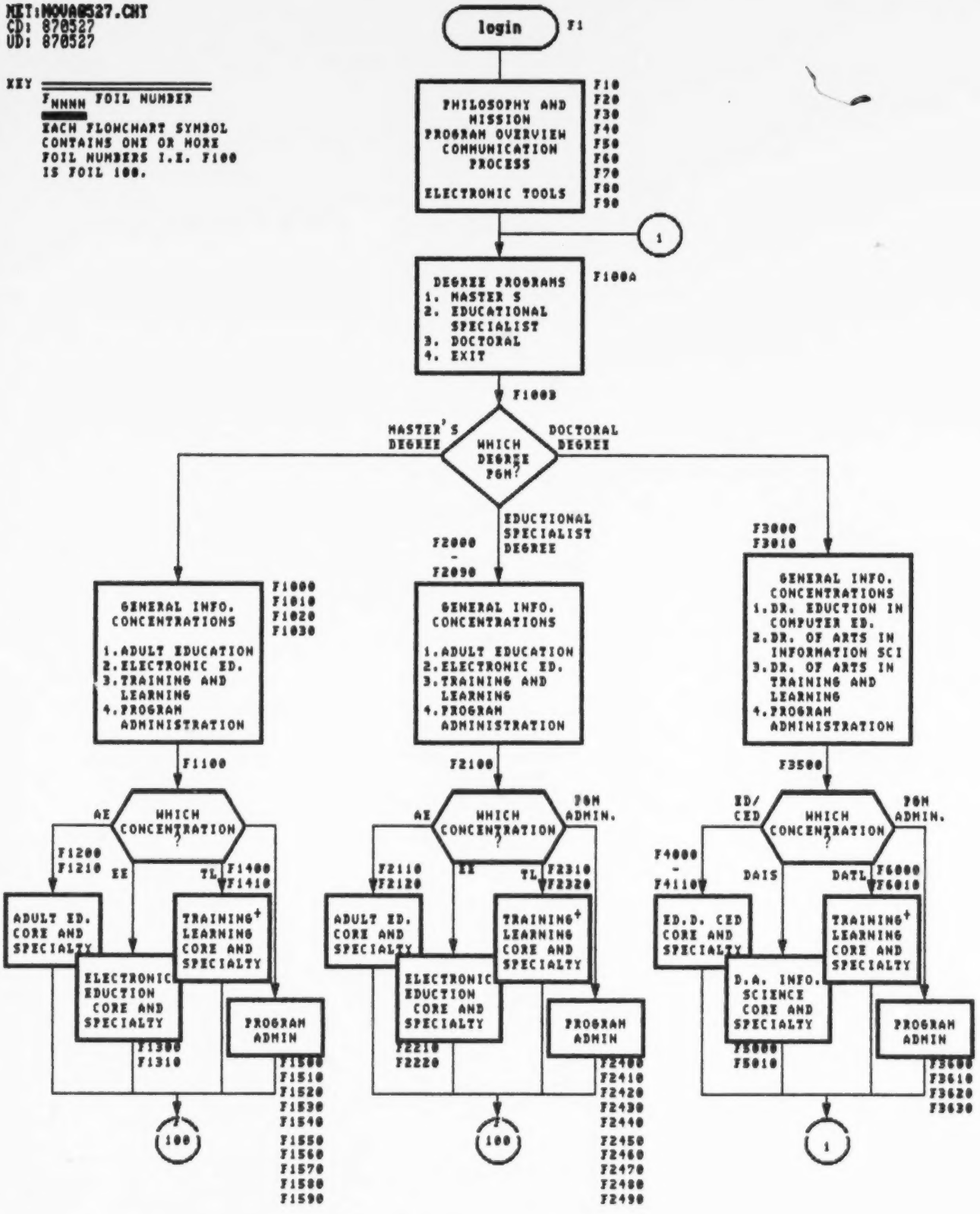
APPENDIX H

Screen Sequence Flowcharts


NET:NOVA8327.CNT
CD: 870327
UD: 870327
LOGIN
WELCOME INTRO
PHILOSOPHY & MISSION.
PROGRAM OVERVIEW
COMMUNICATION PROCESS
ELECTRONIC TOOLS
STUDY AREAS
1
MASTERS
DOCTOR
EDUCATIONAL SPECIALIST
GENERAL INFORMAT-ION
CONCEN-TRATION AREAS
DOCTOR ARTS
DOCTOR COMP. ED.
T&L
DOCTOR
INFORMATION SCIENCE
CORE ++ SPEC
CORE ++ SPEC
CORE ++ SPEC
OTHER PROGRAM ?
yes
no
1
GENERAL INFORMAT-ION
CONCEN-TRATION AREAS
ADULT ED.
ELECT. ED.
TRAINING & LEARNING
CORE + AE.
CORE + TL.
CORE + AE.
OTHER SPEC. PGM.
yes
1
GENERAL INFORMAT-ION
CONCEN-TRATION AREAS
ADULT ED.
ELECT. ED.
TRAINING & LEARNING
CORE + AE.
CORE + TL.
CORE + AE.
OTHER MASTERS PGMS
yes
1

NIT:NOVA0527.CHT
CD: 870527
UD: 870527

KEY
FNNNN FOIL NUMBER
EACH FLOWCHART SYMBOL CONTAINS ONE OR MORE FOIL NUMBERS I.E. F100 IS FOIL 100.



APPENDIX I

Writer's Workbench Summary

********** SPELLING **********

Possible spelling errors in report.all are:

Admis	ence	practicum
CBL	FICC	prerequi
CED	GMC	protect
CHAPTER2.TXT	HARDCOPY	reformatted
CHAPTER3.TXT	hardcopy	reused
CHAPTER5.TXT	ive	runtime
desktop	logo	Sausalito
DISKETTE	MacIntosh	sions
Diskette	ments	SoftAd
diskette	min	StoryBoard
Diskettes	Mizell	StoryTeller
diskettes	online	Thombs
documentat	PC's	TTA
ED.D	PRACTICUM	Verbatum
Ed.D	Practicum	

If any of these words are spelled correctly, later type
spelladd word1 word2 ... wordn
to have them added to your spelldict file.

********** PUNCTUATION **********

The punctuation in report.all is first described.

6 double quotes and 0 single quotes
8 apostrophes
24 left parentheses and 24 right ones

The program next prints any sentence that it thinks is
incorrectly punctuated and follows it by its correction.

No errors found in report.all

********** DOUBLE WORDS **********

For file report.all:

No double words found

********** WORD CHOICE **********

Sentences with possibly wordy or misused phrases are listed next,
followed by suggested revisions.

For file report.all

beginning line 187 report.all
Several participants in the formal evaluation process
*[indicate]*d that they would now consider initiating a similar
project for their own institution.

beginning line 216 report.all
I designed *[all of]* the monochrome and color screens, the
interactive panels, and the sequence of the presentation used
on the diskette.

file report.all: number of lines 663 number of phrases found 2

Please wait for the substitution phrases

---------- Table of Substitutions ----------

PHRASE SUBSTITUTION

all of: use "all" for " all of"
indicate: use " indicate" for " give an indication of"
indicate: use "show, suggest" for " indicate"

---

* Not all the revisions will be appropriate for your document.
* When there is more than one suggestion for just one bracketed word, you will have to choose the case that fits your use.
* Capitalized words are instructions, not suggestions.
* To find out more about each phrase, type "worduse phrase."

NOTE: If you want this program to look for additional phrases or to stop looking for some, for instance to stop flagging "impact," type the command dictadd.

********** SPLIT INFINITIVES **********

For file report.all:

No split infinitives found

NOTE: Your document is being compared against standards derived from 30 technical memoranda, classified as good by managers in the research area of Bell Laboratories.

READABILITY

The Kincaid readability formula predicts that your text can be read by someone with 13 or more years of schooling, which is a good score for documents like this.

VARIATION

Variation in sentence length, type, and openings prevents monotony. More importantly, a lack of such variation suggests that every topic and every sentence has equal weight, which makes it difficult for the reader to pick out the important points.

In this text 64% of the sentences are simple and 21% are complex. These percentages should be closer together. The difference between these percentages, here 43, should be less than 30.

Although the short, simple sentence is the most direct and comprehensible form for an individual sentence, overusing such sentences may make a document seem disjointed. Writing instructors say that a document is better when less important ideas are grammatically subordinated to more important ones so that the grammatical structure emphasizes the logical structure.

This document could be improved by combining some of the sentences to subordinate minor ideas to major ones. To do this, join two simple sentences by using a "that" clause or an adverb, such as "although." Put the less important sentence in the subordinate clause after the "that" clause or adverb. For example, the following sentences

a. The short, simple sentence is the most comprehensible form for an individual sentence.

b. Overusing such sentences may make a document seem disjointed.

were combined in the paragraph above. The combined sentence subordinates sentence "a" to sentence "b," thus emphasizing that the information in sentence "b" is more important than that in sentence "a."

Additionally, the longest sentence is 83 words long. Sentences this long are frequently lists, which will be easier to follow if you convert them into a list format. To find all your sentences over 50 words, type the following command after this program is done.

style -gt 50 filename

Writing teachers also stress that no more than 75 percent of the sentences in a text should begin with the subject of the sentence; these start with the subject 87% of the time. Try starting more of your sentences with prepositions, adverbs, or conjunctions. This change will have the added benefit of adding variety of sentence length and type.

SENTENCE STRUCTURE

Passives_and_Nominalizations

You have appropriately limited your use of passives and nominalizations (nouns made from verbs, e.g. "description").

% readability grades:
(Kincaid) 12.5 (auto) 12.4 (Coleman-Liau) 13.8 (Flesch) 15.0 (36.6)
sentence info:
no. sent 214 no. wds 3754
av sent leng 17.5 av word leng 5.32
no. questions 3 no. imperatives 1
no. content wds 2336 62.2% av leng 6.88
short sent (<13) 31% (67) long sent (>28) 9% (20)
longest sent 83 wds at sent 105; shortest sent 4 wds at sent 6
sentence types:
simple 64% (137) complex 21% (45)
compound 8% (18) compound-complex 7% (14)
word usage:
verb types as % of total verbs
tobe 39% (145) aux 16% (59) inf 11% (42)
passives as % of non-inf verbs 27% (87)
types as % of total
prep 10.6% (397) conj 3.8% (144) adv 1.8% (68)
noun 29.9% (1121) adj 22.1% (828) pron 3.9% (148)
nominalizations 3 % (112)
sentence beginnings:
subject opener: noun (47) pron (30) pos (1) adj (42) art (67) tot 87%
prep 5% (10) adv 2% (4)
verb 1% (2) sub_conj 4% (8) conj 0% (0)
expletives 1% (3)